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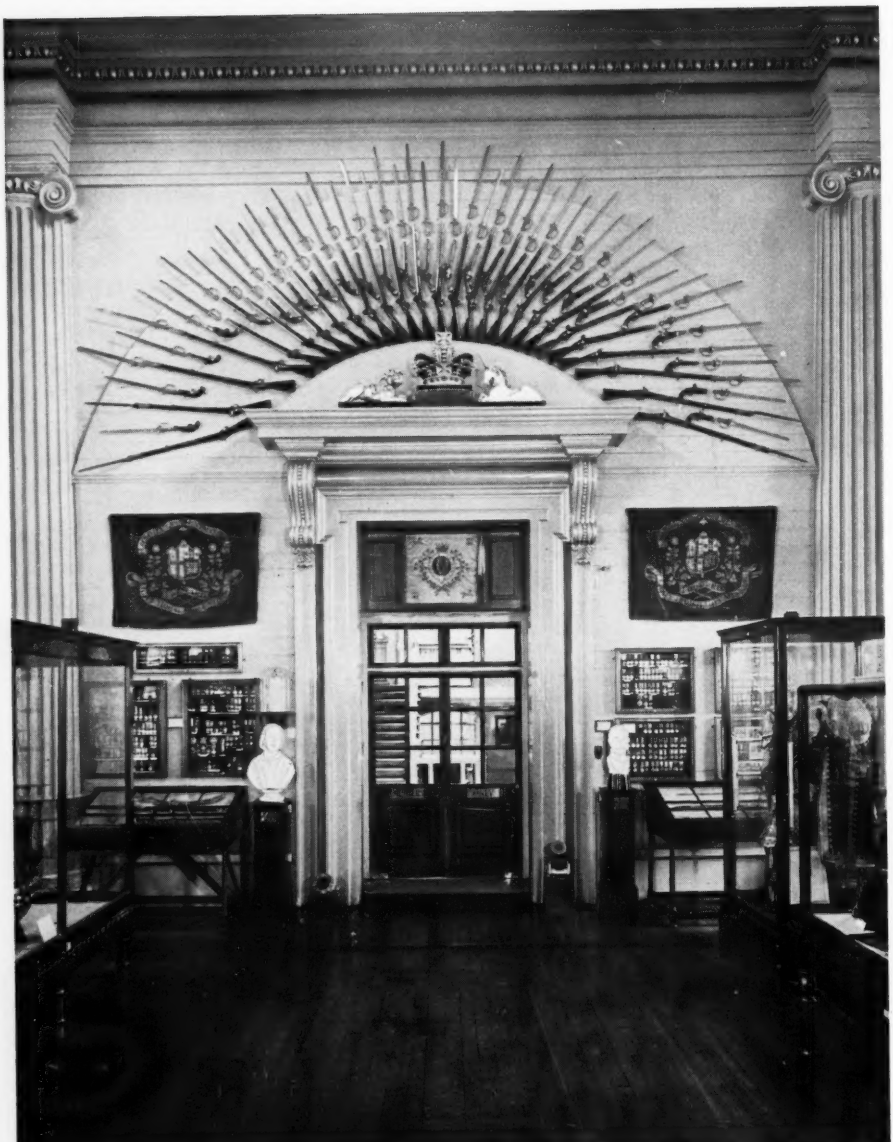

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WOMEN-AT-ARMS

By MAJOR REGINALD HARGREAVES, M.C.

On Wednesday, 9th November, 1955, at 3 p.m.

DAME HELEN GWYNNE-VAUGHAN, G.B.E., D.Sc., LL.D., in the Chair

THE CHAIRMAN: It is a very great pleasure for me this afternoon to be able to introduce Major Hargreaves, who is an historian of very wide experience and of very high repute. He has lectured not only in this Country but also to many Service establishments in the United States. He published his first book in 1927, and has been busy on this subject ever since. Those of you who have read his recent articles in the JOURNAL of this Institution know that he is attracted by the rather curious sidelines of military history, and today we are to hear him speak about one of the strangest of these!

Before he begins, I should like to congratulate him on a point which is to me of some interest; because, ever since 1917, some of us have from time to time tried to think of feminine equivalents to the military terminology which applies to men; we have thought of a great many things, some good and some bad, but we never have thought of "women-at-arms." I do thank Major Hargreaves very much for that brilliant inspiration, and we look forward to hearing him on the subject.

LECTURE

I KNOW of no spectacle more ridiculous than that of a man trying to talk authoritatively about the members of the other sex. Yet that is precisely my situation here today! However, as I propose to confine my remarks to the relation of what a certain number of women *did*, without in any way attempting to explain *why* they did *what* they did, the margin for error should not be too great.

It was an XVIIIth Century Frenchman who observed that "Women hate war because they can't interfere in it." Well, that may pass for wit, but it certainly won't pass as history. For in one way or another women have been 'interfering' in warfare since the remotest days of antiquity.

We have it on the authority of Pliny the Elder that a numerous corps of Amazons was present at the Siege of Troy, and added very considerably to its asperities. Of Scythian stock and very fierce in battle, they kept up their race with the aid of their male prisoners, whom they then proceeded to slaughter off without the slightest compunction; surely one of the most monstrous examples of ingratitude for services rendered in the whole of history! News of this dastardly procedure inevitably got about, so that the Amazons' opponents were at great pains not to be taken captive.

And since they also killed off all their male children, it is scarcely surprising that as a race they gradually petered out—unsung and unlamented.

Thereafter, we hear little of women's intervention in warfare—except behind the scenes—until the time of the Crusades. At this period quite a number of women accompanied their menfolk to the Holy Land, and several of them fought alongside their husbands. One of the most famous of these doughty female warriors was Gildippe, the Flemish wife of a French knight in the train of Raymond de Châtellon, and by all accounts she swung a very pretty sword indeed.

Another Amazonian Crusader fought at the siege of Kerak, which Raymond de Châtellon held firmly against the repeated assaults of Sal-ed-din. In the midst of operations, however, the lady elected to get married to one of Raymond's knights; and Sal-ed-din, coming to hear of the happy event through his admirable intelligence service, very thoughtfully suspended all warlike operations for a clear three days, so that the honeymoon should have a fair chance of getting into its stride. Whether, after the honeymoon, the lady ceased to fight—except domestically—unfortunately does not emerge.

If we except Joan of Arc and Isabella of Castile, in the ordinary way there was no place in the ranks of the mediæval army for the aspiring female warrior, although a vast number of women followed in the army's train—wives and sweethearts, and odd bits and pieces picked up by the way. Indeed, I fear that the ' odd bits and pieces ' picked up by the way greatly outnumbered their more circumspect companions. For the Ordonnances of War of King Henry V devote two lengthy paragraphs to measures hopefully designed to keep them in some sort of order. Unquestionably, one of the Provost Marshal's busiest subordinates was the *Hürenweibel*—an office which I fear can only be bluntly translated as whoremaster.

As might only be expected, there are records of several women who stowed away to ' go for a sailor ' in the adventurous days of Queen Elizabeth I.

But the earliest record I have come across of a woman serving as a soldier in the guise of a man refers to a certain Mrs. Anne Dymoke, who shouldered a pike in the Civil War armies of Fairfax and Cromwell.

This vigorous wench was accompanied in the field by her husband; and I put it that way because while he remained a plain ' private centinal,' she speedily acquired the responsible rank of corporal. Presumably good master Dymoke was already quite accustomed to being under his wife's orders, for he doesn't appear to have resented her promotion in the slightest; and they both survived the war and, it is to be hoped, lived happily ever after.

Another Parliamentary woman-soldier, serving alongside her husband, went by the name of William Clarke. She appears to have been quite good at her job, and might even have outstripped Corporal Dymoke and acquired sergeant's shoulder-notches but for the fact that in the July of 1655 she had to suspend her military activities while she retired into private life to give birth to a son.

Her comrades in arms, with whom she was extremely popular, celebrated the event in a rough-and-ready ballad, which runs as follows:

> " With musket on her shoulder, her part she acted then,
> And everyone supposed that she had been a man;
> Her bandaleers about her neck, her sword hang'd by her side,
> In many brave adventures her valour has been tried.

For exercising of her arms, good skill indeed had she,
And known to be as active as anyone could be,
For firing of a musket, or beating of a drum,
She might compare assuredly with anyone that come.

For many other practices she gained the love of all,
For leaping or for running or for wrestling for a fall;
For cudgels or for cuffing, if that occasion were,
There's hardly one of ten men that might with her compare.

Yet civill in her carriage and modest still was she,
But with her fellow soldiers would often merry be;
She would drink and take tobacco, and spend her money too,
When as occasion served that she had nothing else to do."

This cheerful doggerel was printed in due course, with the following advertisement attached:

"All that are desirous of seeing the young souldier and his mother, let them repair to the sign of the *Blacksmith's Arms* at East Smithfield neere unto Tower Hill in London, and there enquire for Mrs. Clarke, for that was the woman's name."

* * *

But it was the great Duke of Marlborough's army that harboured perhaps the most notorious female soldier of them all; a woman whom Defoe has rendered immortal under the name of 'Mother Ross.'

Born in Ireland in 1667, some 25 years later Kit Cavanaugh—as she then was—had become the proprietress of a snug little Dublin inn, bequeathed to her by a favourite aunt. And in Dublin, in due course, she married a sober, frugal individual of the name of Richard Welsh.

It was Richard's habit to sally forth to settle the brewer's account weekly; and one week in the year 1693 he set out on his usual errand, but failed to return.

The next intelligence of him to reach his anxious wife was a letter from Flanders, telling her that her husband had been filled up with liquor, inveigled aboard a transport, and carted overseas, where he came to his senses to find that he had been enlisted as a private in the 1st or Royal Regiment of Foot.

Now, although contemporary service in the ranks was theoretically for a definite term of years or for the duration of the war, in actual practice it more often worked out as life service, or until serious injury brought about the man's discharge. In effect, Kit had to face up to the fact that if she ever wanted to see her husband again, she'd have to go after him; and the only way in which she could go after him was to enlist. And that is exactly what she made up her mind to do.

After all, it was not so difficult as, nowadays, it might seem. Kit was a fine upstanding creature, with a slim boyish figure, and a physique as strong as a horse. There was no question of a probing medical examination that would reveal her sex; providing she took oath that she had never been ruptured or "troubled with fits," that was about all there was to it.

Anyway, Kit experienced no trouble whatsoever in joining up; and since she quickly mastered her drill and the manual of arms, she was soon posted overseas.

Slightly wounded in the foot at the disastrous battle of Landen, after recovery Kit transferred to the Scots Greys, and with that distinguished regiment she made the famous march to the Danube and fought in the subsequent action of the Schellenburg.

The battle of Blenheim led to the thoroughgoing plunder of Bavaria, in which Kit took an extremely enthusiastic part. For she always had a sharp eye for a profitable bit of loot, and woe betide the man who tried to dispute her possession of it, or the dealer who sought to knock down her price.

Very shortly after Blenheim, Kit at last made contact with her husband. As a matter of fact, she walked casually into an inn and surprised him in the arms of another woman. As you may well imagine, there was a right royal rumpus, which ended in Richard's agreement to respect his wife's secret and generally leave her alone; and the twain returned to their respective regiments. There was more behind this separation, I think, than a sense of guilt on one side and outraged constancy on the other. By this time Kit was definitely committed to the military way of life, to which she was far more wedded than she could ever be to a mere man. Soldiering was in her blood, and she was not prepared to forgo the rough and ready but stimulating comradeship of billet and bivouac for the tamer joys of matrimony.

But if only she had known it, her time with the Greys was nearly ended. For at the battle of Ramillies a stray shell tumbled her from her saddle with part of her scalp torn away. Falling at last into the hands of the surgeons, the secret of her sex was inevitably revealed, and although her officers were kindness itself, they could not prevent her discharge from the regiment. She was paid off, therefore, with a present in the shape of a hatful of golden pieces and a couple of dresses, in which she found it very difficult to manœuvre. With her small capital she set up in business as a sutler, and in this capacity made the next three campaigns.

Richard Welsh was killed at Malplaquet; but Kit did not long remain a widow, for she helped herself to husbands as casually but instinctively as some folk help themselves out of other people's cigarette boxes.

It must have been something of a jolt to Kit when the war ended, and—once more a widow—she accompanied the troops back to England. Marlborough received her with his unfailing kindness, and she was even presented to the Queen, who was graciously pleased to award her a pension of a shilling a day for life—in spending value worth about £3 a week in terms of our present-day money.

On the strength of this Kit again set up in business, opening a shop for the sale of hot eels and farthing pies, the contemporary equivalent of the fish and chip emporia that perfume our modern streets. Unhappily, her third husband proved to be a boozy rascal who drank away her money as fast as she made it. Kit's way out of the dilemma was to have the fellow trepanned into the Army, where he was encouraged to pull himself together sufficiently to gain non-commissioned rank.

Kit ended her days as an out-patient of Chelsea Hospital, but not until she had marched in solemn slow-step with the cortège that bore her beloved 'Corporal John' to his last resting place. She herself was ailing, but she lingered on until 1739, dying in London, where her remains were interred, with full military honours, in the churchyard of St. Margaret's, Westminster.

A contemporary of Kit's was Yorkshire Nan, who made five voyages before the mast in one of the Queen's warships, before taking her discharge and securing employment as a domestic in Her Majesty's Household. Yet another contemporary was

Nellie Bowden, a west country lass who entered the Royal Navy as a ship's boy at the tender age of fourteen. For some years the secret of her sex remained unpenetrated, and when finally it was revealed, she was retained on the ship's books as " the Captain's domestic," and given a separate cabin as a sewing room.

In 1740, another adventurous woman, Anne Mills by name, joined the frigate *Maidstone* as a carpenter's mate ; and I possess an engaging print of the lady, arrayed in a fabulous pair of trousers, and grasping a naked cutlass in one hand and a Frenchman's severed head in the other.

* * *

One of the most extraordinary women ever to don the red coat was Hannah Snell, the female marine.

In the first instance—having run away from home because of an unhappy love affair—she enlisted under the name of James Gray in one of those temporary regiments raised for the '45 rebellion, and long since disbanded. Unfortunately, she got on the wrong side of a non-commissioned officer quite early in the proceedings, and the outcome was a charge which brought a sentence of 600 lashes—subsequently reduced to 300. For all that, it was a terrible punishment even for a man to undergo, let alone a woman. But with extraordinary stoicism the pseudo Private James Gray bore it without a murmur, buoyed up, maybe, by a private determination to desert at the very first opportunity.

That opportunity was not long in coming, and Hannah fled south. Arriving at Portsmouth, the lure of the red coat again proved too much for her, and she speedily enlisted in the 2nd Marines. Appointed to the *Swallow* sloop of war, of Admiral Boscawen's squadron, Hannah was soon on her way to India, where operations were in progress against the French.

The reduction of Pondicherry was the main objective, and in all the fighting leading up to the town's investment Hannah played a brisk and courageous part. During the final assault on the stronghold, however, the unfortunate woman was struck down with a dozen superficial wounds in the legs and a musket ball that lodged in the groin.

Now the one thing the XVIIIth Century fighting-man dreaded more than anything else was being carted off to the hospital tents. For as one of the victims of the contemporary surgeons' heavy-handed attentions summed it up, " Trust a medico and he will kill you ; don't trust him and he will insult you." " Wise men," Fortescue has recorded, " took refuge in the virtues of cold water, and kept the surgeons at a safe distance." And that was precisely the course pursued by Hannah Snell. Determined that her sex should not be discovered, with the aid of a native woman, whom she bribed with a single rupee, she operated on herself, extracting the heavy leaden bullet, and treating her wounds with a native salve which undoubtedly possessed astonishing curative properties. For not very many weeks later she reported back for duty.

Her leg wounds, however, had left her with something of a limp ; and the Marines having turned up their noses at her, she was entered as a foremast hand on the books of the *Tartar* pink, subsequently being transferred to Captain Lloyd's line—of—battle ship, the *Eltham*.

Hannah made several short voyages in H.M.S. *Eltham*, taking her final discharge in 1750. After a brief appearance at the Royalty Theatre of Varieties in Wellclose

Square, Hannah invested her small savings in the lease of an inn down Wapping way, which she renamed " The Widow in Masquerade, or the Female Warrior " ; with a brightly painted sign board depicting the lady herself, one half of her stalwart form clad in full regimentals, and the other half arrayed in a seaman's blue jacket and striped ankle trousers.

A petition to the King, backed by the Duke of Cumberland, eventually brought the veteran a pension of £30 a year. Matrimony—she worked her way through three husbands—the birth of a son—an encounter with the diarist John Knyveton—so the years passed until her death in the February of 1792. And although her funeral was not dignified with full military ceremonial—perhaps the Admiralty and the Horse Guards were undecided whose responsibility it was—at least her portrait was given a place of honour in the Hall of the Royal Hospital, Chelsea.

* * *

The United States has been described as a land where the women do as they like and the men do as they're told. As a recent and very happy visitor to that fabulous land, I shall neither refute the contention nor support it. But it is not, I think, to be questioned that American women have always played a very considerable part in their country's destiny.

This is certainly true of the years of struggle that led to America's independence. Washington at White Plains would certainly have been very much in the dark as to the intentions of the British, had it not been for the intelligence forwarded him by Lydia Darrah, the unassuming but quick-eared Philadelphia housewife, on whom some of ' Good-natured Billy ' Howe's more garrulous staff officers were billeted.

In the same way as the British permitted six married women per company or troop to accompany their menfolk overseas on active service, so the continental armies also had their train of female followers—the only thing in the way of nurses that either side could boast.

With the American forces, quite the most famous of these authorized camp followers was red-headed Mollie Pitcher, the wife of a soldier in the 7th Pennsylvania Regiment. Tireless in the performance of those innumerable small chores that need to be done about a camp, she was equally ready to lend a hand in the actual fighting.

When the British forces from New York were battling their way up the Hudson, with the idea of forming a junction with ' Gentleman Johnny ' Burgoyne's army at Albany, it was Mollie Pitcher who laid and fired the last gun as the Americans evacuated Fort Clinton. At the battle of Monmouth, fought on a particularly hot and steamy day of June, Mollie was indefatigable in bringing water to the men in the firing line, where no fewer than 50 of the unfortunate fellows perished from exhaustion. Then, when her husband fell desperately wounded, she first dragged him out of the line of fire, and then hastened back to serve one of the battalion guns, whose crew had been severely reduced by casualties.

That was Mollie Pitcher's last fight—except with the officials of the Pensions Board, with whom she conducted an active vendetta for years, but from which, I am happy to say, she undoubtedly emerged the victor.

Where the British forces were concerned, apart from the alluring and complacent commissaries' wives who always appear to have been on hand for the consolation of general officers commanding, there was the usual quota of women married on the strength, and the inevitable draggle-tail of somewhat ambiguous

females who marched with the cooks, and were known as the black guard. Burgoyne's army, that came to grief at Saratoga, started out from Canada some 7,300 strong. But the 'tail' of unauthorized camp followers numbered close on 2,000.

Among the officers' wives with permission to accompany the expedition were Lady Harriet Acland and the Baroness Frederica de Riedesel; the last-named complete with three bouncing daughters, the youngest of them less than three months old.

At the age of 30, Frederica had already participated in the final campaign of the Seven Years War; and although in appearance she resembled nothing so much as a Dresden china shepherdess, she had the constitution of a battery mule, the courage of a lion, and an appetite that found bear steak broiled over a smoky camp fire "really capital eating."

With 'Gentleman Johnny' cornered near Saratoga, 'Fritchen' unhesitantly took charge of the wounded; turning the cellars of an old colonial mansion into a hospital—the ground floor was under fire—tearing up her own dainty linen to serve as bandages, and ravishing her own meagre store of provisions to furnish comforts for the stricken.

When the terms of surrender had finally been agreed, the Baroness drove herself and her brood straight across to captivity in the American lines, where chivalrous General Schuyler offered her shelter until she could join her husband.

Personally, I know of no more blithely indomitable a spirit in the whole of history; and it is entirely characteristic of her that she should have endowed her two children born on the other side of the Atlantic with the names of Kanada and Amerika—both spelt with a 'k'!

* * *

The last quarter of the XVIIIth Century was particularly rich in women who followed the wars either at sea or on land. There was Mary Anne Talbot, who joined the Infantry as a drummer, was severely wounded at the 1793 siege of Valenciennes; deserted, and after some surprising adventures aboard a privateer, took service in the 74-gun *Brunswick*, in which vessel she was present at Howe's victory of "the Glorious 1st of June." On this occasion she again became a casualty, and was given her discharge. But the sea was in Mary Anne's blood, and for some years she served as a supercargo in the mercantile marine. But eventually she began to feel the after-effects of her many wounds; and a small pension having been provided for her, she lingered on for a few years, dying at the early age of thirty, in the February of 1808.

Of considerably tougher metal was Phoebe Hessel, who joined the 5th Foot in time to fight under Ferdinand of Brunswick at Wilhelmstahl, in the June of 1762; a victory she was still talking about in 1821, when she died at the ripe old age of 108; an age at which she might very well have met and exchanged reminiscences with Mary Dixon, who had served in the ranks throughout the Peninsular War, and even survived the pounding match of Waterloo.

Needless to say the sea still exerted its attractions for the more adventurous. For Nancy Perriam, engaged by Sir James Saumarez to "make and mend the Captain's clothes," had just begun work on a flannel shirt when the battle of St. Vincent opened up. Rolling up her sewing, Nancy bustled off to help her husband in the powder magazine, thereafter repairing to the cockpit to lend a hand to the surgeons.

There were, of course, a number of women present, on both sides, at Trafalgar; and an old list of people employed at the Admiralty ends up with the somewhat cryptic entry, " . . . and a cat belonging to the necessary woman." The cat, I might add, drew an allowance of 1s. 6d. a week for milk and cat's meat; but what the 'necessary woman' got, and for whom she was 'necessary,' I have been unable to discover.

* * *

I have spoken so far mainly about women who actively helped to inflict injury on the enemy. Amongst those who sought to repair the damage wrought by war, one of the most successful—apart from the immortal Florence Nightingale, of course—was the woman who spent the whole of her working life as an army surgeon, under the name of Dr. James Barry.

Born in 1795, and ostensibly a *male* student at Edinburgh Medical College, she gained a brilliant diploma, and after a spell as regimental surgeon, was posted as a Staff-Surgeon to the Governor of Cape Colony.

The most skilled and conscientious of physicians, she was at the same time abominably capricious, dictatorial, and cantankerous. So it is hardly surprising that she should speedily have found herself embroiled in one duel, challenged to fight another, and the central figure in a court of enquiry. Yet so admirable was her work that by 1858 she had attained high rank, and but for her death in the year following, there is every likelihood that she would have been gazetted a Knight Companion of the Bath. It was only *with* her death that the Horse Guards became aware that Inspector-General James Barry was actually a woman.

There is a long list of women-at-arms—from the Maid of Lilliard to the gallant *vivandières* of Solferino and Magenta—that I should like to include if only there were time. As it is, I must content myself with the relation of one more story, which is well worth retailing because it is so much nearer to our own times.

Early in 1914 a certain Flora Sandes had long since completed her training and could regard herself as a fully qualified nurse. So, with the outbreak of war, she lost no time in joining the Madame Mabel Grouitch Ambulance unit in Serbia, where things were going pretty badly.

During the retreat which was forced on the Serbs by the overwhelming numerical superiority of their enemies, Flora Sandes worked faithfully and tirelessly with the regimental ambulance of the 2nd Infantry Regiment. But as medical stores became exhausted and more and more of the wounded had to be abandoned, this intrepid woman donned Serbian uniform and took her place in the firing line. Enrolled officially on the books of the 2nd Infantry Regiment's 1st Battalion, she was soon promoted to corporal, and was personally decorated by Prince Alexander.

Regarded almost as a regimental mascot, Flora—now a sergeant—was severely wounded in an assault on the Bulgar lines. But she was back for the final advance which started in August, 1918; and it was not until 1922 that she was given her discharge from the Serbian forces—with the rank of captain on the reserve—and was free to retire to the little retreat in Suffolk where, I'm glad to say, she still leads a life of quiet usefulness, as the occasional letters I receive from her make abundantly clear.

* * *

I have made mention of a few of the women whose urgent sense of service or longing for adventure led them not only to hazard injury or death, but to risk

exposure and the mockery and humiliation that might have followed in its train.

It was not until the War of 1914–18 that women were organized on a considerable scale to play their part in conflict; and, despite the gloomy prophecies of the diehards, a remarkably good job they made of it, too, as I well remember.

They were called upon to serve in even greater numbers in the more recent war, and once again they responded magnificently, dealing with extraordinary competence with the far more complicated techniques of warfare that so-called progress had brought into being.

And now one is bound to ask oneself—what of the future? Are we to "kiss them all good-bye"? Or is the need of them greater than ever before?

One of the things it is extremely dangerous to overlook is the fact that in 3,400 years of recorded history only 268 years—less than one in 13—have been free from war. That is a pretty grim record; and if the future is to show any improvement, it will only do so if we bear carefully in mind George Washington's cautionary dictum, that "The best way of preserving peace is to be prepared for war."

In that process of careful preparation it is my firm belief that the Women's Services can play a progressively important part. It has been demonstrated past all question that there are some essential tasks that women perform more faithfully and with greater precision than the best of the men. And those particular tasks bid fair to increase in scope and responsibility.

In the warfare of the past, women were a source of stimulus and inspiration. Nowadays, not only can they inspire, but they can also proffer immense and invaluable help. So, personally, I cherish the hope that they will continue to 'interfere' in war in every possible way open to them, and on a scale that matches the pressing need for them that so patently exists.

XVIth Century Thomas Nash once observed that "Woman is man's worst bargain." Were he alive and in the Services today, I'm willing to take a pretty heavy bet that he'd soon sing a *very* different tune.

DISCUSSION

THE CHAIRMAN: The moment has now come for the second best stage of the proceedings, the discussion.

We have had a most interesting and inspiring lecture, but I think there are a great many things that most of us still want to know about those enterprising members of long-past forces. The story of the surgeon, for instance, struck me as particularly interesting, because she was doing a highly skilled job, and one would like very much to know how she obtained the training which she had. I think Major Hargreaves said that she had a full Edinburgh degree; I think that was very good, for surgery in those days must have required very great sternness of mind to carry out. It was done, of course, entirely without anæsthetics.

Major Hargreaves has given us a great many interesting examples; I wonder whether there were many other less well-known examples of that tendency of women to join His Majesty's Forces?

THE LECTURER: Yes, there were; I spared you a list of about 50 because we do not want to be here for 24 hours! There was one, for instance, in the list who tried to get into the 1914–18 War as a private, but I decided to refrain from mentioning her name because she might still be alive and might not want her name to be brought into the open.

As far as I can make out, in all major wars there were a certain number of women who tried to get into them. Of course, the stricter medical examinations of more recent times have made it much more difficult. For centuries the proviso " no rupture and no trouble with fits " served as the only test and made it extremely easy for anybody to get into the Services if they made up their minds to do so. Of course, one cannot go entirely by size : some of them were quite big strapping creatures. But a small, slim girl trying to pass off as a ship's boy could not have had much difficulty. The whole thing was, I think, based upon the laxity or absence of any preliminary medical examination.

THE CHAIRMAN : I think that all of us are very grateful to the lecturer for the extremely interesting and rather stirring information that he has given us. It is very curious to look back to those individuals, almost all of them wives joining with their husbands, and to the great courage, enterprise, and capacity which they showed in the work that they undertook. We are very grateful indeed to the lecturer for having told us about them and are more interested than ever in the history of " Women-at-Arms." We thank him very much indeed. (*Applause.*)

ADMIRAL SIR HENRY MOORE : Madame Chairman, ladies, and gentlemen. Before we close, may I, on behalf of the Council, add our thanks to Dame Helen herself ? I think she has made history this afternoon ; she has made history quite often, but I think that once again she has done so ; I think she is the first lady who has taken charge as Chairman here. We are very grateful indeed to you, Dame Helen, and thank you very much. (*Applause.*)

KENYA—MAU MAU

By General Sir George Erskine, G.C.B., K.B.E., D.S.O., A.D.C.

On Wednesday, 23rd November, 1955, at 3 p.m.

The Rt. Hon. The Viscount Chandos, D.S.O., M.C., in the Chair

The Chairman: I accept invitations to preside or speak with great reluctance, partly from my own diffidence and partly from my regard for my audience, but today I have no speech to make and it gives me the utmost pleasure to preside over this meeting, which will be addressed by General Sir George Erskine.

When the troubles in Kenya were still mounting and many of the problems, both military and civil, remained unsolved, it became evident that we must have a commander-in-chief to conduct the campaign, for that is what it was. Above all, we needed a man with wide experience of administration and knowledge of political matters who was accustomed to solving the sort of difficulties which arise between the conflicting interests—as they often are—of the military and the civil powers in such an emergency as we saw in Kenya.

The Secretary of State for War, Mr. Antony Head, whom I have always found one of the most co-operative and far-sighted of Ministers I have ever had to deal with, suggested Sir George Erskine, whom I did not know at that time except by repute; a happier choice could not have been made.

After a distinguished career as a commander in the field, General Erskine was head of the S.H.A.E.F. Mission to Belgium when Belgium was starving and when the difficulties of restoring her lively national life were acute. In these days it seems almost impossible to remember that situation. General Erskine's name will live in Belgian history as one who, faced with this appalling problem, never turned back until it had been solved.

A little later in his career he undertook this job in Kenya. I had the privilege of driving with him through many of the areas in which his troops were operating. We became jointly impregnated with the Kenya dust. I could see for myself, as an old but junior soldier, the confidence which the officers and men had in him. I am eternally grateful to him. He has deserved well of Kenya and of the wider interests of Great Britain which he has served with such unselfishness and such single-minded purpose.

LECTURE

I DO not propose to trace the history of the Mau Mau rebellion nor the grievances, real or imaginary, which enabled unscrupulous leaders to whip up to fever heat the passions of 1,500,000 Africans of the Kikuyu tribe. This was no sudden outburst, but the cold-blooded unfolding of a carefully prepared programme. The tribe had been conditioned over the years, but particularly since the end of the war, to regard the European as his enemy and the thief who had stolen his land.

The Mau Mau programme visualized complete unanimity of the Kikuyu tribe, strong support from neighbouring tribes, and violent action to exterminate the European and later the Asian.

The oath was introduced as a reversion to old tribal custom. It was a wild distortion of those customs. It was made compulsory in order to force every Kikuyu into the movement. The terms of the oath and the method of taking it were so revolting that it was a deliberate challenge to many Kikuyu who were Christians and others who had adopted western customs. The oath was also an important means of collecting funds and creating a secret society.

During 1952 it became more and more evident that the movement meant business and a state of emergency was declared in Kenya in October, 1952.

I arrived in Kenya in June, 1953. By this time the rebellion had been in existence nine months. The Mau Mau had committed some revolting murders of Europeans, they had slaughtered many hundreds of their own people, and were in a fair way to dominating their own tribe and spreading the rebellion to neighbouring tribes. The Government of Kenya had taken measures to bring matters under control and there was a general awareness of the gravity of the situation.

My instructions were to take charge of operations against Mau Mau and for that purpose all security forces, including the Police, were placed under my operational orders. I was in no way responsible for the government of the Colony. East Africa became an independent command directly under the War Office. In addition to Kenya it included Uganda, Tanganyika, Mauritius, Nyasaland, and Northern Rhodesia. The whole area was about the size of Europe west of the iron curtain. My main concern of course was Kenya, but the other territories contained danger spots which could not be ignored.

The Kikuyu live in their native land unit on the eastern slopes of the Aberdare Mountains. Their western boundary is the dense Aberdare Forest at about the 8,000 ft. contour and their eastern boundary is the low and arid plain which is sparsely inhabited and can only be developed by artificial means. To the north lies the Nanyuki settled area and to the south the most southern district of the Kikuyu land unit runs almost to the capital, Nairobi. In this area there are many European farms, mostly coffee and sisal. To the north-east of the Kikuyu, along the southern and eastern slopes of Mount Kenya, lie the land units of the Embu and Meru tribes who are closely related to the Kikuyu.[1]

The Kikuyu are to some extent boxed in, and although their country is probably the most fertile in Kenya, it carries a very heavy population. This state of congestion was not always the case, but the demand for labour in Nairobi and on the settlers' farms, combined with improved medical science, has raised the Kikuyu population at a great rate. Some had been turned out of the settled areas and others had returned voluntarily to Nairobi or their land unit where there was neither space nor work for them all. The Embu and Meru on the other hand had plenty of first class land and this probably accounted for the comparatively lukewarm attitude of these two tribes, particularly the Meru.

The outward and visible signs of the rebellion in June, 1953, could be measured by a high degree of intimidation and murder in the Kikuyu land unit, particularly directed at government servants, loyalists, and Christians. In the European settled areas there was a general sense of insecurity and danger. Many settlers live an isolated life and those close to the Kikuyu land unit and dependent on Kikuyu labour were in the centre of the rebellion.

There were two natural reactions which had developed before I reached Kenya. In the Kikuyu land unit the loyalists had joined together and, with the help of the Administration, had formed themselves into a Home Guard for their own protection. In the settled areas and Nairobi the local Europeans had mobilized themselves for their own protection. These local people knew the country and the inhabitants and it was not long before they had taken up the challenge to their security. Hard and unreasonable things have been said about the settler, but the solid fact is that he regarded his home as his castle and took sensible measures to protect it and help his neighbours. If he had not done so the inadequate security forces in the early days

[1] A sketch-map faces page 22.

could not have done it for him. The Kenya Regiment and the Kenya Police Reserve were his means of expression and both were settler forces. They undoubtedly saved many European lives and retained an essential degree of control for the Government at a time when the Government had little to offer.

The first decision I had to make was whether it would be possible to resolve the rebellion within the normal and emergency powers of the Government or whether it would be necessary to resort to a state of martial law. Every commander-in-chief dealing with a major rebellion is faced with this problem and it deserves some comment. If the civil government has completely broken down, it is the duty of the commander-in-chief to take charge and by means of martial law restore the situation. Most continental countries have provision within their law for a ' state of siege ' by which the civil government legally surrenders authority to the military. British law has no such provision. Owing probably to the unfortunate experiences under Oliver Cromwell the British Constitution recognizes no legal military control in any circumstances. But it is realistic enough to recognize that sometimes civil governments lose control and something drastic has to be done. The commander-in-chief must judge when this point has been reached and apply martial law. There is no legal sanction for martial law—it is an entirely illegal process justified by the circumstances and bound by no rules but the will of the commander-in-chief. After it is all over, Parliament can pass an Act of Indemnity which then makes legal everything that has been done. Consequently, applying martial law is not lightly undertaken. If you have read of the troubles which generals in Ireland, India, and elsewhere had to contend with, you will appreciate that martial law is often more trouble than it is worth. The use of the military under Ordinance to administer military courts and do other things are civil expedients and not martial law.

Fortunately, I found that the Government of Kenya were determined to use the very considerable powers at their disposal to the fullest extent. They could and did pass emergency regulations of severity and entirely appropriate to the military requirements. There was never any question of the Government of Kenya breaking down, although it clearly needed active military support in a number of areas.

I therefore readily accepted the role of support to the Civil Power appreciating that the Civil Power was all out to support me. I must here acknowledge with gratitude the unreserved support given by His Excellency the Governor and all officers of the Government and Police. Right at the beginning we decided to do the job together and I have never been more certain that this was the correct solution.

In operations of this kind it is important to be clear about the legal position of the security forces. Officers and men must be quite clear about their duty and not feel they are being invited to act against the law. In Kenya the rules were straightforward and simple. The Kenya Government defined certain areas, mainly uninhabited forests, as " prohibited "—this gave the security forces full play for developing unhampered military operations. Other areas in the troubled zone were declared " special areas " where the security forces had the right to challenge and stop anybody and fire if they did not halt. Over and above this the common law recognizes that security forces must prevent a felony and bring to justice those who have committed one, bearing in mind the general rule that no more force than is necessary to achieve the object should be used. This in fact gave the security forces sufficient scope to use force in a sensible, reasonable, and controlled manner. I never had any trouble with the application of these rules once the position had been made clear to everyone.

In operations of the kind we were undertaking there were no prisoners of war since we were not at war and did not give the Mau Mau the rights of a belligerent. On the other hand we often detained people and handed them over to the Civil Power. I made it very plain that the Army did not hold people and certainly did not ill-treat people they detained temporarily. A detained man might be innocent or liable to the death penalty according to the circumstances of his capture. It was for the security forces to provide the evidence and for the Civil Power to bring him to justice.

For joint operational purposes it was necessary to have a command structure at all levels where combined action by civil, military, and police could be organized. At Colony level we had two bodies: the Colony Emergency Committee and the Director of Operations Committee. Both these committees had done some first class work, but the C.E.C. was too large to get swift action and the Director of Operations Committee was not at a high enough civil level to make decisions. The introduction of the War Cabinet with only four members was a great improvement. The representatives were the Governor, Deputy Governor, Commander-in-Chief, and the Minister without Portfolio. All other government work not directly concerned with the emergency was handled by the Council of Ministers. An able Secretariat served both bodies, followed up decisions, and ensured that there was no overlapping. In the War Cabinet we found it necessary to establish an Emergency Joint Staff consisting of representatives of the Army, Police, and Civil Government who examined in detail problems before they came to the War Cabinet. The E.J.S. took much detail off the shoulders of the War Cabinet and enabled them to concentrate on broad policy and decisions. The Treasury were represented on the E.J.S. and this enabled the Minister of Finance to be kept in the picture of present and future financial liabilities. As a result of this system directives covering future periods of three or four months were issued incorporating action required by government and security forces.

At lower levels we had Provincial and District Emergency Committees. In each case the Civil Administrator took the chair while the senior police officer of the Province or District represented the Police. The Army was represented by the senior officer responsible for the area. This in fact meant that the army representative changed fairly frequently, as the deployment of the Army did not remain static but was changed to bring greater weight first in one place and then another.

The Emergency Committees at Provincial and District level were responsible for joint planning and allocation of responsibility. The commanders of military and police were responsible to their superiors for executive action. Planning by committees is essential, but command by committees is fatal.

An examination of the security forces at my disposal showed that I required more troops and a considerable expansion of the regular Police. It was agreed that the 5th Battalion, King's African Rifles, who were due to go to Malaya, should stay in Kenya. The War Office also agreed to find a brigade headquarters and two British infantry battalions, and as the demand for forest tracks and other engineer work could not be met by the hard pressed P.W.D., who hitherto had been responsible for all engineer services, the War Office agreed to send an engineer regiment, whose work during the next two years proved invaluable.

There was ready agreement to a programme of expansion for the regular Police but this took much longer to achieve. Inspectors had to be recruited overseas and they had to be carefully chosen and selected. They then had to be taught the language

and trained in their police duties. All this placed a very heavy strain on the police training machinery. In addition, wireless sets, clothing, equipment, and vehicles for the Police were required on a considerable scale. The Kenya Police did a fine job to hold the fort as well as they did and at the same time to expand so rapidly. There is no short cut to training a policeman—if you put him to the job before he is trained you risk serious trouble.

I have already mentioned the Home Guard formed by the loyalists in the Kikuyu land unit. When I first arrived in Kenya they were the main object of attack by the Mau Mau. Almost daily some post was attacked and not infrequently these attacks were successful. Most of the Home Guard were old men and they were poorly armed. It is to the credit of the officers of the Administration that they were able to keep these men together. It also showed remarkable courage on the part of the men themselves that they were prepared openly to support the Government in spite of the very evident domination of Mau Mau in many areas. When I first saw these Guards I was in grave doubts if they would survive. There were considerable risks in arming and training men who might prove unreliable. Against this there was a great deal to be said for building up a resistance movement within the tribe and allowing them to play a major part in suppressing Mau Mau. The Administration were enthusiastic and saw in this movement something which they could nourish and support. They undertook to provide the leadership. I decided to give the Home Guard maximum support and I never regretted it. A Regular full colonel was made the adviser and as a result of his untiring efforts and the energy of the Administration the Home Guard spread right through the Kikuyu, Embu, and Meru Reserves. Their ramshackle posts of the early days became well sited and well defended strong points. The composition gradually changed until it embraced many young men who had previously been with Mau Mau. As posts proved their reliability more weapons were issued until they reached a scale of about 15 precision weapons and 35 spearmen to a post.

Originally entirely local in conception, they gradually co-operated with their neighbours and with the Police and Army. An increase in European leadership was provided and we aimed at, but seldom achieved, a scale of one district officer, Kikuyu Guard, to six posts. This European leadership was almost entirely drawn from Kenya young men and excellent leaders and administrators they proved to be. The Home Guard had its critics, and the purists sometimes forgot this was a resistance movement which deserved sympathetic encouragement and all the control and leadership we could give. It did not help anybody to complain that they had not the approach of the London policemen to their duties. They did the job, and ultimately the best were picked out and incorporated in the Administration as regular tribal police.

The mode of life of the African in the land units was to live with his family in his hut on his own patch of land. The population was therefore spread in tiny units over a huge area. Here and there were a few mission centres and here and there a few groups of shops where markets were held in normal times. There were no villages. The difficulties of providing protection and exercising control were greatly increased by this dispersion of the population. For security reasons it was essential to concentrate the population and the opportunity to do this came as soon as the Home Guard posts became properly established. The movement into villages was against all Kikuyu tradition, but the improvement in security which it provided and the increase in control which it gave the Administration enabled us to overcome opposition. One of the first directives of the War Council laid down as a policy the

concentration of the population into villages. Much skill and energy was shown by the Administration in applying this policy and very soon the social advantages became apparent. Austere and squalid to start with, these villages rapidly improved as schools, churches, first aid centres, and sports grounds were added. This revolution is one which may have lasting and beneficial results and a civilizing influence over the whole tribe. It would have been impossible to have achieved villages without the Home Guard.

There were, broadly speaking, four areas which required treatment. These were the native land units, the forests of the Aberdares and Mount Kenya, the European settled areas, and last but not least Nairobi City.

I decided to deal first with the Kikuyu land unit because of the importance of taking the offensive into the heart of the Mau Mau area without delay. I hoped this would also assist to establish the Kikuyu Guard. Operations between June, 1953, and March, 1954, were directed mainly against the Kikuyu districts of Fort Hall and Nyeri—elsewhere I used the minimum troops to hold the situation while the Police were building up their strength.

It soon became clear that the next target must be Nairobi City. We therefore planned and carried out in April, 1954, a large-scale clearance of Nairobi. The Mau Mau were well organized in Nairobi and it was their main arsenal for supplies of arms, ammunition, clothing, money, and recruits. All this was underground and very difficult to discover. The Kikuyu population of Nairobi had increased rapidly since the declaration of the emergency and there were very few who were not engaged in helping Mau Mau in one way or another. The problem was how to remove the bad ones and leave the good ones. It would have been easier to remove them all and return only the proved loyalists, but practical considerations made this impossible. In the end we worked out a formula which removed those who could not show a real and useful reason for being in Nairobi. We did not claim that all those who were removed were guilty, but we did claim that their credentials required careful examination. They were therefore removed to prepared camps where a process of thorough examination could be carried out. The operation, which went under the code name of " Anvil," made a thorough sweep of Nairobi. Crime dropped dramatically. The central Mau Mau organization was seriously disrupted. Supplies were cut off, and the whole Mau Mau movement received a shock from which it never recovered.

After " Anvil " I decided to deal thoroughly and systematically with the Kikuyu areas nearest to Nairobi and then move outwards until I had dealt with the whole of the native land units, including the Embu and Meru. The operations of 1953 and early 1954 had done much to re-establish the Administration, Police, and Home Guards in these areas ; but I was aiming at a state where these areas could be entirely self-supporting without any assistance from the troops. Consequently, the Army concentrated on a period of training the Home Guard and attending to the adjacent forest areas while the Police took over more and more the responsibilities for law and order within the native land unit. When the situation had been sufficiently improved it was my intention to turn in strength on the forest areas.

The opportunity to do this came at the end of 1954. During the next four months continuous operations in the forest dealt the gangs heavy blows and inflicted severe casualties on them. A most satisfactory feature of the operations was that the areas left in charge of the Administration with only Police and Home Guard to help them not only held their own but showed a steady improvement.

In the early days, assistance from the air was given by local pilots with their own aircraft. This was soon organized as the Kenya Police Reserve Air Wing and it rendered sterling service. The aircraft used were Piper Pacers and Cessnas which proved ideal for the flying conditions of Kenya. Their role was reconnaissance, contact with ground patrols, intercommunication, and supply dropping. Very close liaison was established between pilot and troops.

The R.A.F. had already brought some Harvards to the Colony to answer calls for offensive action in the forests. These aircraft dropped eight 20-lb. bombs and had one front gun. They were very good aircraft for this type of work. The Air Ministry agreed to increase the number to a flight of eight aircraft to cope with the constant call on their services. We established a joint operations room at G.H.Q. in which the Army and R.A.F. pooled all sources of information, laid down priorities, and generally directed the air operations to the best possible advantage. It soon became apparent that there was a case for heavy bombs to get at the gang hide-outs in the dense forest and deep ravines. It was clear to me in 1953 that it was going to be some time before I should be able to spare the Army in a big way for operations in the forests, but it was necessary to make the Mau Mau feel insecure and harassed if they tried to lie up in the forests. The Lincoln bomber filled this gap admirably. We developed at the same time air photography and indirect bombing aids which enabled attacks to be carried out through cloud and in darkness. In circumstances of this kind you have to be satisfied with indirect results such as an increase in surrenders, a drop in Mau Mau morale, prisoners' reports, and similar evidence. It is seldom that you can report actual casualties immediately after an attack. I am convinced that the air effort prepared the way for ground action in the forest—without it the ground troops would have had a tougher and more difficult job to do. As it was, when we turned on the forest in strength we found miserable demoralized bands of terrorists with little or no cohesion.

The settled areas produced special problems of their own. These areas are very large and the population very scattered. Passive protection would have swallowed up the whole of the security forces and we should never have got on with offensive action in the native land units, the forests, and Nairobi. Fortunately the settler showed a great readiness to help and protect himself. Schemes were developed for mutual protection, control and screening of labour, patrolling, stock guarding, and farm guarding. Some military assistance was provided and the steady build-up of the Police gradually lightened the burden on the settler. The way in which the settler did so much to look after himself was an important contribution because it enabled me to concentrate at the heart of the trouble—the native land units and Nairobi City.

The soldier's job in the forest was not easy. It required special training, special equipment, and high class junior leadership. We built up the technique with the assistance of white hunters, trackers, and common sense. A jungle school was a great help for pooling and co-ordinating ideas and for training young leaders. The fighting unit was the patrol of six or seven men and a leader. Skilled native trackers were added and sometimes dogs. The men had to be lightly equipped and yet they had to stay on patrol for four or five days or longer. Special rations, air drops, forest bases, porters, pack animals, and many other expedients were used to give the patrol mobility and endurance.

The Kikuyu are natural forest people—they move silently and swiftly and are completely at home in the forest. They chose their camps with skill and their hiding places were always difficult to approach and well guarded by sentries. On the other hand they showed little or no offensive spirit in the forest, they hardly ever stopped to fight, and on contact almost always bolted and scattered in all directions. They were difficult to hem in or surround. On the whole we found in large-scale operations that it was more profitable to lay ambushes and entice the Mau Mau to walk into them than to do too much moving ourselves.

There was certainly no lack of variety in the tasks given to the troops. Sometimes in the forest on his own, sometimes in the Native Reserve helping the Administration and Police, sometimes helping the settler, and at other times in Nairobi City, the British soldier brought to bear his usual good humour and made many friends while carrying out his task. The King's African Rifles deserve a special word of praise, including the fine battalions from Uganda and Tanganyika. The African soldier is a first class fighting man, easy to command, easy to lead, and has great powers of endurance. I can strongly recommend a tour with the K.A.R. and a first-hand look at the problems of East Africa.

In spite of the difficulties in the forests, we inflicted a steady and increasing number of casualties on the gangs. But the country is so thick and the area so vast that desperate men would be able to evade capture for a very long time. Knowing as we did the low state of morale and the strong desire on the part of many of them to stop fighting, we offered especially favourable surrender terms in January, 1955. Nobody would be tried for offences committed before the date of the announcement if they came forward and surrendered, but they would be detained perhaps for a very long time. This announcement which had the full support of the Kikuyu loyalists was hailed with indignation and active opposition by some of the European settlers. Nearly a thousand surrendered under these terms in six months. This was a positive contribution to thinning out the remnants. We also made contact with a number of gang leaders in an endeavour to produce a mass surrender. These leaders were very suspicious of us and each other. There is no doubt that very many wanted to surrender, but whether they were prevented by fear and jealousy amongst themselves or suspicion of us will probably never be known.

In a rebellion of this kind a good intelligence service is invaluable. You should expect to find as part of the Police a Special Branch whose business it is to study subversive movements and individuals concerned with these movements. In Kenya, the declaration of the emergency in October, 1952, was accompanied by the arrest of important Mau Mau leaders which crippled for a time the top leadership of the movement and is proof that the Police were not asleep. Nevertheless it was evident that an immediate increase in the Special Branch was required to cope with the widespread Mau Mau organization. This expansion had already started before I reached Kenya and continued until we had a thoroughly effective network. You might describe the Special Branch as providing strategical intelligence; they were not organized to provide tactical intelligence such as where a particular gang was to be found on a particular evening. I came to the conclusion that we required an entirely separate intelligence organization serving both the Police and Army, to lead the security forces to tactical objectives. We therefore set up a military intelligence organization with Provincial and District military intelligence officers working in definite territorial areas and getting to know all and everything about their own area. Information was freely exchanged with the Special Branch, but each was working on different objectives. The Special Branch on trends and often comparatively long term

ideas, the military intelligence strictly on targets. In all intelligence work it is the individual that counts and I was lucky in finding so many able and resourceful Special Branch and military intelligence officers who seemed to have a natural flair for the work, which was always exciting and often dangerous. Many were local Kenya young men, but a number of young officers with no previous African experience did magnificent work. Gangs became really frightened when they found we could break through the security and hospitality which the population had given them for so long.

During the dry season of January to April, 1955, we concentrated our attention on the forests with considerable success and were pleased to find that some of the worst areas which we had handed over to the Administration continued to improve. One of the advantages of doing the job so closely together was that the soldier did not leave a vacuum when moved to the next task. The Civil Administration and Police took care that each area was consolidated by them while we were operating. Some areas yielded more easily than others. In general the most militant areas yielded most quickly. The most difficult areas were those in which the population was thoroughly soaked in the Mau Mau creed but outwardly behaved themselves. In their case it was a matter of showing that the whole movement was discredited and winning them back as loyal citizens. District officers of the Administration showed much skill and imagination in solving this problem.

When I left Kenya in May, 1955, there were still important jobs to be done. There were for instance still the remnants of the forest gangs to be rounded up and this was not likely to be a quick or easy task. Cattle thieving is one of the principal sports of the African and it is unlikely that it will ever be eliminated entirely, but there was still much to be done to reduce the type of cattle theft which was direct nourishment to the Mau Mau gangs.

Although the Mau Mau rebellion has certainly been mastered and there is today no threat to the state, the future poses some very difficult problems for all those whose home is Kenya. If the lessons of the last three years are read well and truly, Kenya and other parts of East Africa could enter an era of happiness and prosperity and set an example to the rest of Africa. But if anyone thinks the re-establishment of law and order is the signal to return to old ways they will be sadly disillusioned. The opportunity for a progressive and constructive approach by all races to their problems exists today. It would be a tragedy if this chance was missed.

My belief is that we shall hear less and less about Mau Mau and more and more about progressive and constructive things to develop the lovely country of Kenya.

DISCUSSION

GENERAL SIR IVOR THOMAS: Are the Kikuyu now back on the farms?

THE LECTURER: In a great many cases the Kikuyu did not entirely leave. The places where they left the farms were in certain areas of the Rift Valley. In the early days some of them were turned off and told to go away and others took fright and bolted from this part of the settled area. But around Nairobi and in many other areas there always remained a pretty strong Kikuyu leavening. The Kikuyu are the best labour for agriculture and they also make the best domestic servants.

We tried to establish on each farm a Home Guard rather like that I described in the native land unit. In fact, we have employed many people from the native land unit and put them on a farm and given the farmer a Home Guard of his own. Then the labour has returned and is working. That is not the position in every case but it is improving.

I do not think farming is possible in certain areas without Kikuyu labour. They tried bringing in labour from other parts of Kenya but it was not satisfactory. The Kikuyu labour is nearer home and they like being near home. The others who came there did not feel really happy about it.

The labour is steadily returning and is brought under greater control by the farmer and is given protection by these guards.

CAPTAIN D. H. HARRISON : Would you say that Dedan Kimattu is likely to be any trouble to us in the near future ?

THE LECTURER : He is an extraordinary character. I believe he was a milk checker at one time. He calls himself a field-marshal and awarded himself the Order of the African Empire. He writes an enormous number of letters.

He has one or two jealous rivals and, as far as I can understand it, they do not get on at all well. As far as I know he is still in the forest. It would be most desirable to have him rounded up. General Heyman, who is in the audience, and who has just returned from Kenya, has more recent information than I have, and I will pass the question to him.

MAJOR-GENERAL G. D. G. HEYMAN : He is an important leader and it would be a very good thing if he were rounded up.

THE REV. JOHN CHARLESWORTH : Has the Mau Mau movement now ceased entirely or has it gone underground ?

THE LECTURER : Our object was to break the power of the movement but I cannot say that it has been entirely broken. Where Mau Mau was most militant and most in evidence we had an easier problem ; we could break it there because those who were keeping it going showed their hands. The most difficult places were where the Mau Mau did not show their hands and outwardly behaved themselves, but were completely soaked in the Mau Mau doctrine.

It was for the officers of the Administration to prove to the rest of the population that the movement was discredited and to bring the population back to the Government side. The Kikuyu are an intriguing people and amongst them there will always be an underground movement or a secret society of one kind or another. I should say that the Mau Mau movement is discredited but not completely destroyed.

MAJOR-GENERAL T. BRODIE : The lecturer said that anyone who thought they could go back to the old traditions would be sadly disillusioned. Would he say how far the white people out there are aware of that ?

THE LECTURER : We are getting on to a question which is not one for a commander-in-chief to answer. There has been a definite awakening in Kenya to the fact that if Kenya is to progress it must do so in a different way from the way people thought before Mau Mau occurred. That means that people are taking a much more realistic view of the country, not only politically but economically. You can see that in the work which Lord Chandos did when he was out there, in establishing the Council of Ministers, which brought into the Government of Kenya representative Ministers of all the races out there. There was a portfolio for an African, there were two portfolios for Asians, and three portfolios for Europeans. That meant that those three races sat around a table and worked out the future of their country and the ending of the emergency.

I do not think that could have happened in 1950–51. It happens today. It is not enjoyed by everybody by any means, and when the votes are cast in Kenya in 1956, in the elections, we shall see what the people of Kenya have thought about it and what their views are after the last two or three years.

MAJOR-GENERAL A. CHATER : Has the expedient been considered of moving the Kikuyu tribe away from the hills and forests and settling them out in the plains where they could be more easily controlled ? In the past we have moved tribes in Africa, I think very successfully. One wonders whether a great many lives and a lot of money might have been saved had it been done in this case.

THE LECTURER: If you are going to move a tribe of 1,500,000 people you have a pretty big job on your hands. That tribe owns the land and one of their grievances is that Europeans have settled on their land. If you took the Kikuyu away from their land they would feel that this grievance was real and proven.

What the Government of Kenya has done, which I feel is more sensible, is to take the low-lying land round the River Tana, which has not been cultivated at all because there is no water, and to take large numbers of these detainees to it. They have settled them on the land in work camps and have made canals and water channels with the idea of cultivating an area which hitherto has not been cultivated at all. I have seen that scheme myself, and although at present it is only in a pilot stage I think there is a big future for it. The Government has also many smaller schemes for improving the productivity of the land already occupied. There is great scope in this direction.

The Kikuyu has his home in the land unit and he looks upon his land as his old-age pension. He goes around working elsewhere, on farms with Europeans, or in Nairobi, but when he gets old he wants to go back home to his own land or the family's land.

We should have an impossible job in moving 1,500,000. In fact, there is nowhere they could go in Kenya where the land is not already in use—except on very poor land.

GROUP CAPTAIN H. S. RICHARDS: Is Mau Mau purely local or has it any support from outside Kenya?

THE LECTURER: I have been asked before whether it is communist-inspired. My view is that it is not, although I think the Communists are always ready to fish in troubled waters and to encourage anything which is embarrassing to us. For instance, Jomo Kenyatta had some part of his education in Russia and no doubt that was helpful in making him a nuisance. But we could find no evidence that there was financial or material support for the Mau Mau movement from overseas.

Of course, there was moral support from many directions, where people wrote to the papers and said what a lot of brutes we were and how nice the Mau Mau were, but that is the only form of support on which I was able to put my finger—moral but not material support.

COMMANDER ARMSTRONG: The lecturer mentioned the Mau Mau oath. Did he have any success with an antidote to the oath and was any effect found on the young people who were captured later in Kenya?

THE LECTURER: At one time there was an idea of a cleansing oath to be administered within the tribe, but the more experienced administrators—and I am talking rather outside my responsibilities here—did not like it. They said, "We do not want to use that sort of method of dealing with them. We want to say that all oaths and that kind of thing are superstitious nonsense." Most of them took that line.

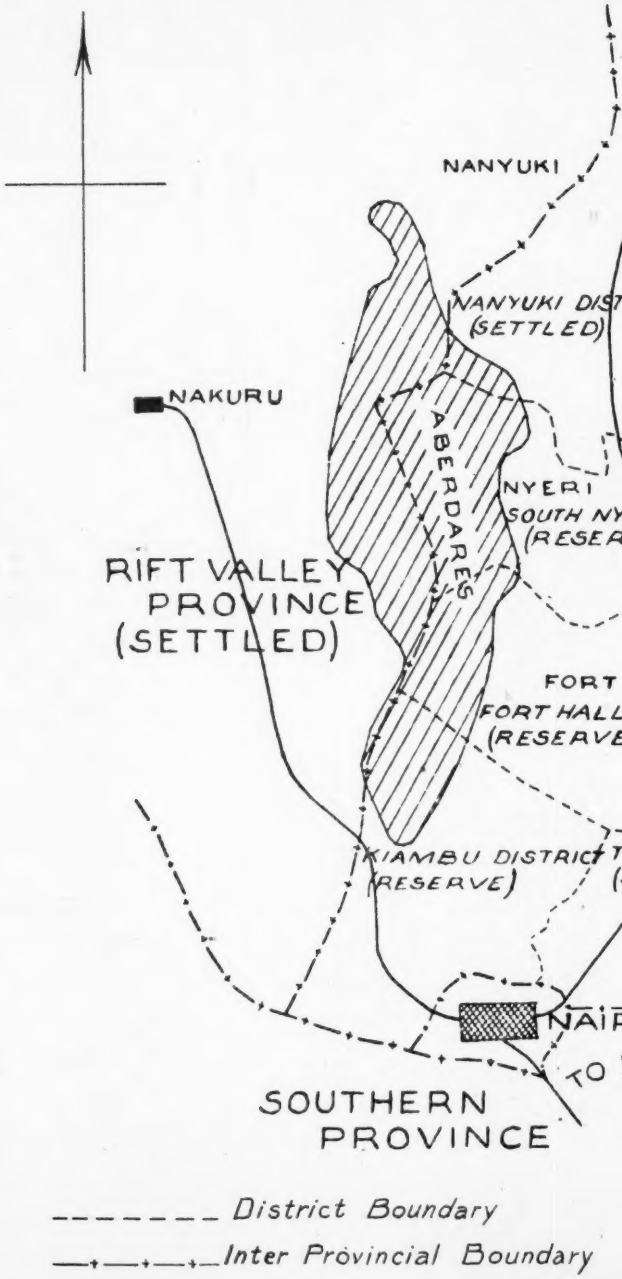
What they did—and this was rather effective—was to say to them, "Confess all that you have done and get it out of yourselves. Make a full confession." One or two district officers were extremely clever and successful in this way; they got a large number of Kikuyu to come along and say they had taken the oath, were sorry about it, and wanted to forget about it. It became a snowball until the whole business of taking the oath began to be laughed at.

Then the Mau Mau started to produce even more disgusting and more binding oaths and we had to break these by getting people to confess. We found that a success because it appealed to the decent type of Kikuyu. Amongst these Kikuyu there were some extremely fine Christian martyrs—I can put it no lower than that. That method appealed to them and it appealed to others who did not believe in using African methods to correct wrong African ideas.

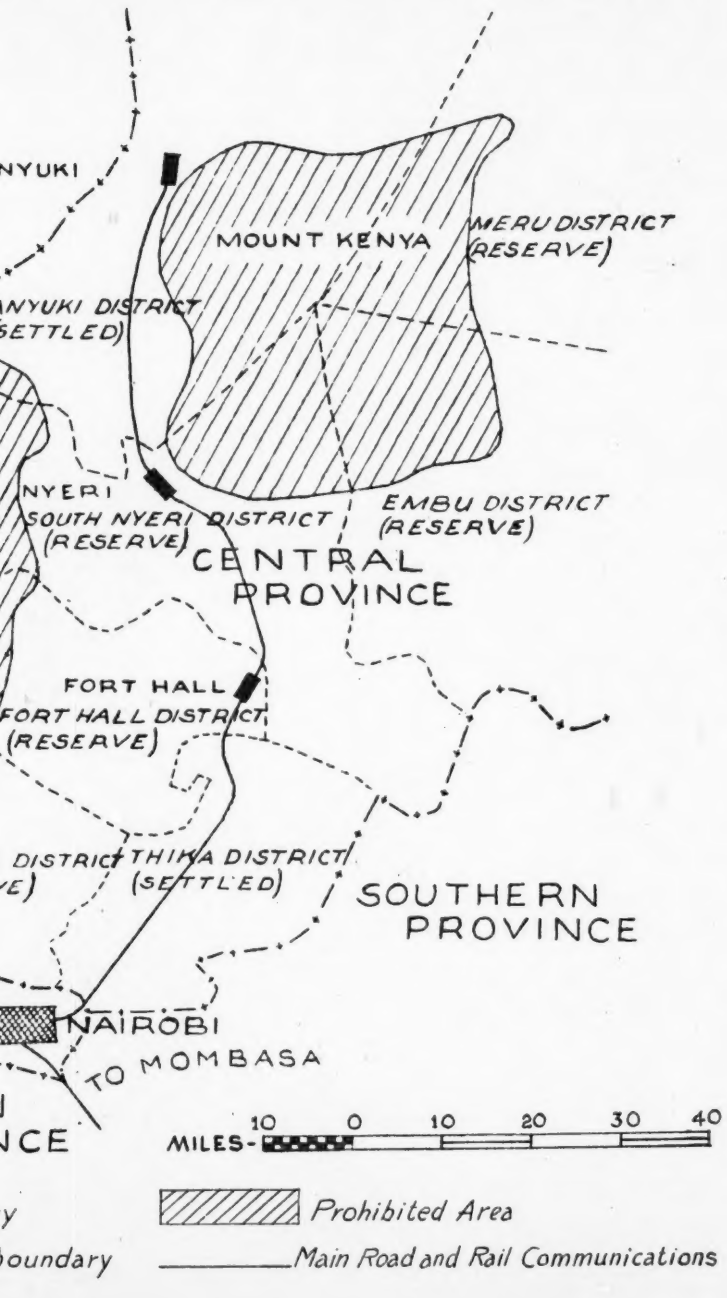
THE CHAIRMAN: I should like to take up one of the remarks which General Erskine made. I am not talking about the idealistic future but about the safety of the tenure of their property for the Europeans when I say there can be no future in Kenya unless we get some form of multi-racial Government there. A very small and modest start has been made. In many parts of Africa this remains true. Putting aside all question of whether people ought to have a say in how they are governed—and I believe they should—you cannot see a safe future for the European farmer unless in the counsels of the Government in Kenya are to be included representatives of the vast numerical majority, the Africans who inhabit this part of the world.

Thanks to General Erskine the problem of Kenya is now of a different nature. I should like to thank him, too, for his lecture. (*Applause.*)

The Emergency Affect



Affected Areas of KENYA



SCIENCE IN WAR

By Dr. R. Cockburn, C.B., O.B.E.

On Wednesday, 30th November, 1955, at 3 p.m.

The Rt. Hon. The Lord Cherwell, P.C., F.R.S., in the Chair.

The Chairman: I am very pleased to be here to introduce Dr. Cockburn to this distinguished gathering. For nowadays the Services are very much concerned with the scientists. I suppose that 100 years ago they would not have thought it possible that we should all be gathered here to listen to a scientist talking to officers of high rank.

I seem to remember a commander-in-chief—I am not sure I did not see his bust on the way down just now—who visited Malta. The Governor told him that he had invited some officers to meet him, and he is reported to have said, "Oh, I hope there are not any gunners. Gunners are apt to be brainy. I don't like brainy people." Nowadays we are going almost the opposite way. It is difficult to get sufficient brainy people in every walk of life, not least in the Services, I am sure.

Dr. Cockburn has been connected with the Services in one way or another for many years. He is a scientist of great attainments. I think he started about 18 or 20 years ago at Farnborough. I met him first in the war at Malvern, where he was concerned with radar. Then I think he went to Harwell to learn how to make warheads. Next he went to guided missiles to find out how to place them. Now I hope he is going to tell us how he has integrated all these various functions into one.

I have great pleasure in introducing Dr. Cockburn.

LECTURE

The Machinery of Defence Science

I MUST say first of all that I am not speaking to you this afternoon as a government official, but as a scientist; and any views I express are my own. The title "Science and War" can cover a wide variety of topics. Last year Sir Owen Wansbrough-Jones gave the Institution an authoritative survey of the present status of defence science and it would be difficult to add usefully to the picture he presented. I am debarred by security from discussing the many interesting projects on which we are engaged in the Ministry of Supply. I propose, therefore, to devote our time this afternoon, with some hesitation before such a professional audience, to a discussion of the strategy rather than the tactics of defence, and of the problems associated with the forward planning of research and development. It is now accepted that the optimum solution to a military requirement can only be achieved if both tactics and techniques are considered simultaneously; but the extent to which military strategy is becoming dependent on scientific developments is perhaps not so generally realized.

One of the most notable developments during the last war was the incursion of the scientist into military affairs on an unprecedented scale. It had been foreseen, well before the outbreak of the war, that survival would depend on the development of new techniques, and the establishment of a technical register under the aegis of the learned societies ensured that the scientific potential of the Country was rapidly harnessed to the war effort. What had not been anticipated was the contribution which scientists were able to make outside their immediate field of experience. By the end of the war they were engaged not only in developing and producing new techniques and in training the Services in their use, but also in the analysis of operations, the development of new tactics, and even the planning of campaigns.

The rapid war-time growth of defence science depended very much on personal relationships, and *ad hoc* machinery and on those unofficial expedients which are so characteristic of British organization. When Sir Henry Tizard addressed this Institution in 1946, he made it clear that the integration of the scientist and soldier must not be regarded as a mere war-time expedient, it was even more essential in peace-time ; and he stressed the need to organize this new aspect of war potential on a more permanent basis. Sir Henry has been for many years the dominating figure in defence science and he remains a continued source of inspiration to those of us who have enjoyed his leadership. It was fortunate, therefore, that as Chairman of the Defence Research Policy Committee he was able to preside over the post-war re-organization. It is largely the result of his wise counsel and the authority with which he interpreted the scientific viewpoint to the Services, that the permanent machinery of defence science in this Country is now so highly developed and technically efficient.

At its core are the government research establishments. Conditions at these establishments are vastly improved, compared with the years between the two world wars. Then there might have been at least some basis for the criticism that government laboratories tended to be isolated from the broader scientific environment and that their work was liable to become sterile. If there was ever any truth in these criticisms, they certainly no longer apply. Nowadays, there is continuous interchange of experience with industry, with the universities, and with government laboratories in other countries. Publication in scientific journals is also encouraged to the maximum extent compatible with security. Since the war a system of emeritus promotion has been instituted, which offers a career in government service to the first class scientist, even if he accepts no administrative authority at all. We in the Ministry of Supply are very proud of this innovation. The status of these emeritus posts is strictly comparable to a readership or a chair at a university.

The total number of scientists and engineers employed by the Ministry of Supply is of the order of 5,000 and the Ministry is one of the largest employers of scientific manpower in the world. In some fields the establishments have built up resources which are too elaborate for any one firm in industry or for the most highly endowed universities to maintain. These are operated on behalf of the Country as a whole, and the establishments thus have responsibilities extending beyond the confines of defence work. They are a valuable part of the national investment. They can, when necessary, concentrate experience in a number of fields of technology to the solution of a specific problem. The rapid solution last year of the Comet failure was an outstanding example of such a co-ordinated attack.

Industry and the universities, of course, make a large direct contribution to defence research as extra-mural contractors, but their leading men also serve as consultants and advisers on an extensive structure of technical committees. A number of these are conducted on behalf of the Defence Ministries by independent bodies such as the Royal Society and the Aeronautical Research Council. The Services have their own scientific advisers and their own teams of scientists who carry out research on operational problems, but senior serving officers occupy responsible posts within the Ministry of Supply and many younger officers work in the research and development teams at establishments. The integration of defence science with industry and the universities on the one hand and with the armed Services on the other is thus very close. It is now unlikely that the military value of any new scientific technique will be overlooked or that an operational requirement will have to be abandoned for lack of expert technical knowledge.

The very efficiency of this machinery creates its own problems. We have not the means to follow up every promising technical possibility or to ensure against every military risk. The total number of qualified scientists in the United Kingdom is much less than 100,000, and the number of first class honours science graduates leaving the universities every year is less than 1,000. Our scientific manpower must be distributed with the greatest care if the demands of industry, of defence, and of the schools and universities are to be equitably met. In defence we can afford to tackle only those projects which are essential for our security and for maintaining our responsibilities overseas. We are a small country, and the Services have always appreciated the doctrine of economy of force. The doctrine implies, however, the acceptance of risks which can only be assessed if the underlying strategy is sound. We are faced with exactly this situation in defence science. Providing new weapons is a lengthy and complex business. Projects must be planned, not on the basis of current requirements, but on those which may arise in 10 years' time. Future requirements can only be defined if the strategical background is clear. The effects of scientific progress are, however, becoming so profound that they are a cardinal factor in establishing future strategy. The trend of scientific development and the evolution of strategy have become mutually dependent and cannot be considered in isolation.

The New Strategy

The combination of the nuclear weapon with supersonic and eventually ballistic flight, favour the offensive to such an extent that to many it must seem that civilization lies at the mercy of the first aggressor. The acceptance of this view could lead to a deep-seated moral defeat, to a philosophy of "eat, drink, and be merry for tomorrow we die." It would, at best, place our Country under permanent blackmail and at worst invite annihilation. There is no justification for such pessimism if we face the challenge boldly. Appreciation of the danger is already a first step towards establishing the conditions for survival and continued progress. The concept of the knock-out blow which the awful power of the nuclear weapon and the range and precision of delivery from the air has revived is not a new one. The possibility of overwhelming surprise has occurred before in history, but not often has it been realized in the event. It too easily underestimates the resource which a nation will discover in the face of a gross military disparity. There is a lot to be said for the maturity of British public opinion which has refused to be panicked by such horrible possibilities.

Although a balance will always be achieved eventually between offence and defence, there can be long periods when one or the other is clearly superior. Thus the 1914–18 War was essentially defensive because of the development of automatic firepower. By the 1939–45 War the petrol engine had restored armoured mobility on the ground and made air power practicable. This swung the balance in favour of the offensive. As the war progressed, however, anti-tank methods developed and radar restored the power of the defensive in the air. If the nuclear weapon had not arrived, the defence would once more have been in the ascendent. But the nuclear weapon has changed the situation completely. It has created a disparity in favour of the offence which can be expected to increase rather than decrease during the next decade or two. This disparity does not rest on a discrepancy of techniques. Post-war developments in propulsion, aerodynamics, and radar are steadily improving the weapons available to both the offence and the defence. But there are two overriding factors which place defensive systems at an increasing disadvantage.

The first of these factors lies in the explosive power of the nuclear weapon. This is many orders of magnitude greater than the largest HE bombs of the last war. It is so great that the offensive need no longer build up and maintain its attacks against a target system over a long period. One concerted raid can carry enough striking power to annihilate an entire target system. The offence can thus decide the time and place of attack, and it has a wide choice of alternative targets. The defensive system on the other hand, must be effective at all times and at every point. It must not merely work, it must work first time. It must be so efficient that the chance of being surprised or overwhelmed is negligible.

The second factor adversely affecting the defence lies in the increasing speed of flight. Air defence is dependent on radar and is fully effective only within the radar horizon. Even though the speeds of both offensive and defensive weapons increase proportionately, the time available for implementing the defensive system is becoming steadily smaller. Of course the offensive vehicle also has less time to effect its attack, but against immobile industrial areas it has only to confirm the appearance of the target at the anticipated time and place. The defence, on the other hand, must not fail to detect and destroy each and every penetration within the short time available. These two factors between them provide a tremendous advantage to the offence, the ability to surprise and overwhelm the defence ; and this is the vital issue in any consideration of future strategy.

I do not wish to suggest that any defence is useless. The apparent economy of one bomb, one sortie, one target is only possible against a defenceless opponent. Even some defence will compel an aggressor to build up a force large enough to absorb losses and maintain this force in a high state of technical efficiency. Nevertheless, the lethality of the nuclear weapon and the speed of its delivery must make it increasingly easy for the offence to exploit surprise. The advantage can, no doubt, be reduced by extending the defence outwards over adjacent territory. But this is only possible in favourable geographical conditions. In densely populated Europe there is no expendable air space.

When the offensive outstrips the defensive, the classical solution is to face the aggressor with a counter-threat. This compels him to divert effort from the offensive and faces him with the same difficulties of defence. If the discrepancy between offensive and defensive techniques is not too great, at least a measure of military stability may thus be established. But the stability is far from complete. In the process of competing for technical or numerical superiority, one side may believe it has achieved a temporary advantage and may embark on a preventive war before the advantage disappears. Furthermore, under conditions of tension, there will always be the temptation to get in one's blow first. Eaeh side hopes to restrain the other by a demonstration of strength and the consequent arms race still further aggravates an inherently unstable situation. When I describe the new strategy which is developing you will no doubt discover a number of unpalatable aspects, but please remember that the precarious stability of an arms race which we have endured up to now has little to commend it either.

A quite different situation arises when the disparity between offence and defence is very large. If both sides become convinced of their inability to avoid immediate and overwhelming retaliation, there is no longer any advantage to be gained from seizing the initiative. The main cause of instability is thus removed. For perhaps the first time in history the nuclear weapon provides the basis for a truly stable

military environment. The key to this stability lies in the superiority of the offence over the defence; and the greater the disparity the greater the stability. If the offensive is accepted to be unstoppable, the logic of retaliation becomes inescapable.

The Logic of Retaliation

We are already approaching such a condition and the gradual relaxation in political tension which has come about during the last few years may well be due to appreciation of the growing certainty of retaliation. Supersonic flight will still further increase the advantage of the offensive and any remaining doubts should be removed when ballistic missiles of really long range are shown to be feasible. The development of these weapons was inevitable after the Germans had demonstrated the military possibilities of the V2, and it is clear that there has been rapid progress in this field. Both Russia and America have announced their intention to provide small earth satellites during the forthcoming geophysical year. Not only the techniques but many of the facilities required to launch an earth satellite are similar to those required to propel a ballistic missile. Furthermore, methods of controlling a satellite on to its orbit are equally capable of controlling a missile on to its target. When potential opponents possess such weapons the threat of strategic attack can no longer be used as a compulsive instrument of policy. Any attempt to impose the threat could only invoke immediate annihilation of one's own population. There can surely be no question of gambling on surprise or hoping for a favourable exchange rate. The stakes are too high; the risks of miscalculation are appalling and the penalties unavoidable. When the major military Powers are seen to possess the means for immediate and unstoppable retaliation, the strategic threat becomes neutralized. This is so, however the threat is imposed, and the role of strategic air forces, for instance, will be similarly restricted.

It would be a mistake, however, to overestimate the extent of the resultant stability. Although retaliation removes one particularly damaging threat, it does not remove the possibility of war. The action of the deterrent is negative, its sole purpose is to neutralize itself. Its defensive function is, moreover, restricted to areas which are completely integrated, both politically and economically. It does not extend beyond what might be called the tacit bomb line, that is a line surrounding objectives which are vital, and clearly seen to be vital, to survival.

This concept of the bomb line is so important that I would like you to consider its implications rather carefully. Neutralization only occurs if threat and counter-threat are truly reciprocal. It is clear that an aggressor would not feel restrained from attacking a nation whose retaliatory weapons were, for some reason, limited to targets of secondary importance. It is perhaps not so obvious, although it is equally true, that in the face of retaliation attacks on secondary targets cannot be prevented by threatening the aggressor's heartland. There have been recent examples of the force of this argument. There will always be areas of interest outside the bomb line, which must be protected, but whose importance would not justify exposing vital objectives to retaliation. These areas must be defended directly. It does not follow, however, that only conventional weapons will be used in peripheral wars. For instance. any large scale naval landing would provide an ideal target for tactical nuclear weapons. Similarly, this threat to the landing force could be forestalled by attacking the opposing air force on the ground, and here again the weapon might well be used. It is sometimes asserted that the tactical use of nuclear weapons would inevitably precipitate an all-out war. This problem was discussed recently in *The Economist*, and the concept of graduated deterrence was quite properly

put aside as unworkable. Sir John Slessor, in a recent lecture, came to the same conclusion. This may be so when no clear distinction can be drawn between military targets and vital objectives, that is if the war occurs close to the tacit bomb line. But further out on the periphery, the decision to use nuclear weapons is likely to be decided only by the local military situation, although not necessarily only by the local military commander.

Even within the bomb line the deterrent does not provide defence against all possible threats. No nation will invoke retaliation while there is any possibility of escaping a dreadful decision. In the absence of any direct defence, a series of minor infringements might have to be tolerated until eventually the ability to impose the deterrent could itself become irrevocably weakened. The position of the bomb line can never be precisely defined and may depend on political factors which cannot be foreseen. Some direct defence in support of the deterrent is still necessary.

The logic of retaliation is the key to future strategy, but it is not an answer to every military problem. It can induce an overall stability in the military environment, but only if it is properly supported; and this stability does not extend to the periphery. Despite these reservations, the nuclear weapon should lead to a real easement in the burden of armament, primarily because of the restraints which this terrible weapon must impose.

Total war will become less likely as the deterrent concept becomes established, and the exhausting attritional wars which have twice within our lifetime wasted the resources of the world may become things of the past. The precautions against such wars, which must be maintained even in peace-time, are, in themselves, a severe burden. We shall find relief in a number of directions when their necessity can be discounted.

The nuclear weapon must also lead to a reduction in the scale of war. Logistic factors alone will prevent the deployment of large forces on the periphery. But there are more compelling reasons. On the one hand, the hitting power of the nuclear warhead has removed the need to carry large quantities of high explosive, and on the other hand large concentrations of material must be avoided. There should be neither the need nor the freedom to mount the *levée en masse* typical of the last two world wars.

Finally, resort to nuclear warfare must inevitably shorten the duration of any major conflict because of sheer inability to make good the resultant damage. This reduces the need for an elaborate infrastructure and should allow effort, otherwise absorbed in support, to be devoted to the front line. Over investment in infrastructure will certainly invite atomic attack and must, in any case, be avoided.

As the strategy of deterrence matures, therefore, one of the most important consequences is likely to be a quite fundamental change in the logistic basis of war. Military strength will become dependent more on the quality of weapons and techniques—and of men—than on the size of front line forces. The most important tactical problem facing the Services is to assess the level at which future wars are likely to stabilize; for the scale of war affects our choice of future weapons and techniques.

For the defence scientist the nuclear weapon has created its own problems. Lethality alone is not enough. Even a hydrogen bomb is of little use in the laboratory. It must be carried to its destination, aimed with precision, and its target must be located and assessed. The stability inherent in the new strategy

will only be realized if we maintain technical parity over a wide range of essential techniques. Moreover, the overriding importance of maintaining the deterrent must not tempt us to neglect other military requirements, without which the whole value of the deterrent would be wasted. We must expect the demand for research and development to increase in the future. This is the price we must pay for the consequent easements.

The Momentum of Research

Once the strategy is clear there need be little disagreement on which are the important lines of development; but it is much more difficult to decide on the proper timing of projects. Building up and preserving momentum in defence projects is one of our most serious preoccupations. The Services are well aware that a weapon is effective only when it is in production and available to the front line in quantity. Even then several years must elapse before the soldier is fully trained and sufficiently familiar with his weapon to make full use of it. There is, therefore, quite understandable pressure from the Services for early delivery. The scientist on the other hand is anxious to incorporate in any new weapon a significant technical advance, and this is only possible if there is a long period of development. The two points of view can be reconciled only if both sides understand the other's problems. Clearly the Services must not be left for long periods dependent on weapons which are becoming obsolete. On the other hand, if there are too many successive projects, the pace of development will be so slow that we merely produce a succession of obsolescent weapons.

The scientist is persistently criticized by the Services for his apparent reluctance to commit himself to dates. There is always something just around the corner and the soldier finds himself habitually reminding the scientist that "the best is the enemy of the good" or even more forcefully "there is always jam tomorrow but never jam today." It is certainly characteristic of science that it is disinterested in the passage of time, and the belief that eventually all things become clear is a deeply established tradition. The scientist engaged on fundamental research is working at the frontier of knowledge beyond which is the unknown. There is continuous activity at this frontier, but for the most part it is a slow process of meticulous observation and the gradual refinement of techniques. No one can tell just when the accumulation of data will fall into a pattern and reveal a stimulating new concept.

The applied scientist accepts a different discipline. It is his task to decide what is feasible with existing knowledge and he cannot escape committing himself to a time-scale. He must decide what risks are acceptable in a new project. He must avoid, on the one hand, over-insuring by taking too small a technical step. This may lead to a weapon which is out of date before it has served any military purpose. On the other hand, too big a jump may lead to unforeseen delays. It requires long experience and most careful judgment to avoid this dilemma.

It is not widely appreciated just how long a period is involved in the consecutive steps of research, development, production, and training. Even during the last war it could take up to five years to produce a new weapon in quantity. In peace-time 10 years can elapse before a new concept is available to the Services. About half this time is necessary for adequate research and development, and about half for production and training. In a new field, such as atomic energy for instance, evolution may take still longer, since it depends on first marshalling large resources and on training personnel in the new skills. These time-scales apply quite widely. It is the rule rather than the exception for developments to occur at almost the

same time in different countries, even though they may be isolated by strict security measures. At the beginning of the last war it was discovered that both sides had evolved radar systems and brought them to much the same stage, each thinking it was first in the field. At the end of the war both Germany and ourselves were introducing jet aircraft into operational service. In the field of atomic energy it is becoming increasingly clear that progress is proceeding at very much the same pace in different countries.

Ten years is a significant fraction of a lifetime and very much greater than the tour of a staff officer. It is perhaps understandable that the Services are sometimes tempted to press for less ambitious projects. But this can only be justified in an emergency. Interim or insurance projects divert effort from the main objective and aggravate the very problem they were designed to avoid. Nevertheless, the issue is a real one. In a number of critical fields, and particularly in air applications, a weapon which takes 10 years to realize may have an operational life of only five years. Obsolescence is due to the introduction of a more advanced concept by a potential enemy, by an ally, or even by the other side of the house ; and the apparent discrepancy between the time-scales of evolution and obsolescence is the natural consequence of continuous development. Even while a weapon is being produced, new concepts are being evolved. No country can expect to remain in undisputed possession of a new technique for any length of time. The only safe assumption is that a potential enemy is as knowledgeable as oneself and that once he has decided on a venture he will find the effort to achieve it. It is, therefore, essential to maintain the continuity and impetus of our own research and development. Once the lead has been lost, it takes a very long time indeed to regain.

The solution is to arrange for successive projects to overlap rather than to shorten development time. In each field there would be two current projects, each planned on the basis of delivery to the Service in about 10 years, but staggered in time by about five years. It will require careful planning and restraint if we are to apply this policy throughout the defence field, but once the momentum has been established a number of advantages should follow. With new developments seen to be imminent, it should not be necessary to squeeze the last ounce into current projects. A lot of time can be wasted by over elaborate specification. It should also be easier to abandon existing methods as soon as it is clear that they will become outmoded and to divert effort to new projects. It requires courage to discard familiar and proven weapons in favour of new and untried concepts ; but the Services must take the risks and the scientist must justify them.

Peace-time today is not a period of quiescence. We are engaged in a campaign involving both the soldier and the scientist, but it is a campaign in time, a struggle for superiority in which the territory is mapped by dates and victory is the achievement of a technique ahead of the enemy. It is a campaign which we are well able to conduct and which we can face with confidence. I do not believe that Armageddon is unavoidable or even likely. Instead, the world may well be at the threshold of a long period of military stability. We have our part to play in guaranteeing this stability, but we must accept that security resides now more in the momentum of research than in the weight of production.

DISCUSSION

THE CHAIRMAN : We have all listened with the greatest interest to the lecture that Dr. Cockburn has given us, and I think it does show that the inter-relations between the scientist and the Services are in pretty good shape. It is quite true that at the beginning

of the last war it was all rather haphazard and, of course, I think that in the Services science had been to some extent not appreciated. Take, for instance, the operational research to which Dr. Cockburn referred. It seems to me that this is the sort of thing that any properly trained officer ought to have done on his own: if he had had real scientific training he would have done it himself and would not have had to call in outside scientists to tell him how to do it.

I am confident that next time officers will do it themselves and will not have to have outsiders to tell them how to set about working out which weapon is the best and which form of application is the most remunerative.

The real thing, in my view, as Dr. Cockburn said, is the enormous need for plenty of really good technologists. I think we have very good scientists, though maybe not enough. But there is a terrible lack in the United Kingdom of high-class technologists. Dr. Cockburn says we have 100,000 in this Country. The Russians have 300,000 in their technological universities at this present moment. If you assume a four-year course, that is 75,000 a year coming on annually—and very good men too. They are turning out twice as many men as is America, more than all the rest of the world together. If we do not do something to keep pace, we shall never be able to hold our own either in arms or in ordinary industry.

I do think, therefore, that this is one of the most important things of all for which we ought to press. It is feasible. It is only that there is this 'snob' feeling that it is better to know about Catiline than about catalysts and so on. You are considered a civilized, educated man if you know, say, about the Gracchi even though you may know nothing about how electricity is made or what causes a certain chemical compound to explode. We must get over that, as I am sure Dr. Cockburn will agree.

I thought his analysis of the situation was extremely penetrating. It looks, according to his view—and I think Sir Winston Churchill rather took that line in one of his speeches—as though we may be in for a long period of stability; a very unpleasant form of stability with nations glaring at one another, each one afraid to take the first step. There will be a lot of bluffing and peripheral infiltration and no one will quite know at what stage they will have to stop. On the other hand, perhaps it is better to be glared at than to be bombed, so to that extent we have gained something.

Dr. Cockburn has kindly said he is prepared to answer questions, so I will not detain you any longer but will throw the discussion open.

CAPTAIN E. J. M. LAWN, R.A.: As the Chairman has said, there is likely to be a long period of peace and stability. The momentum of research obviously depends on the Treasury, but what you are living on now is the fat that you have gathered in the first five years. Will you have the money to maintain your research during a long period of peace, when the actual programme of the Services will be cut?

THE LECTURER: Any problem is easy if you have unlimited effort. I certainly do not assume that we can call on unlimited effort. And by the way, it is not money; it is trained manpower that is really important. I am not an economist; and I can only think in terms of the people who have to evolve the concepts and do the research.

We must expect the Treasury to impose some limit, and we must do the best we can with this limited effort. The key to deploying it in the best way is to take risks not only in the extent of the projects, but in the timing. This is more difficult, because we must look far ahead and accept risks in the future. To put it colloquially, we should skip from one piece of thin ice to another, using our intelligence to outstare the tiger. Forgive the mixed metaphor.

CAPTAIN E. J. M. LAWN: You did say it was not worth while straining after the last 10 per cent. I happen to be a gunner, and there is nothing more disturbing than being outranged when the enemy has got 10 per cent. and you cannot hit back. In all past wars it has always been the enemy who has had the extra 10 per cent., not us.

THE LECTURER: Perhaps I may be a little flippant. Many of my Service friends say that they would not mind what else happened as long as they had an armament of 10 per cent. longer range than the enemy. I must admit one sympathizes with this human attitude. It would be nice to pop at the other chap knowing he could not pop back. But we must decide whether it is better to have 50 guns of 90 units range or ten of 100. That is about the order of choice.

CAPTAIN E. J. M. LAWN: Then there is the question of the morale of the individual soldier. Suppose we have six men to a gun detachment—five or six. Operational research, as mentioned by the Chairman, may say we only need three, but how do we get together with operational research? It ought to be done by the regimental officer. He ought to decide which of the six men is not needed, or which two, if the gun detachment is to be cut down from six to five or four.

THE LECTURER: I ought perhaps to pass that rather technical question to some of my colleagues in the Scientific Advisers' Departments; but I will deal with it generally.

First, could I take the Chairman's point? I agree with him that one reason why the scientist made such a success of operational research during the war was because the soldier had rather a lot on his mind and did not have time to sit down with a slide-rule and pencil. But the situation is far different in peace-time, and—speaking as an ex-scientific adviser—we are hard pressed to keep abreast of some officers who now have a little more leisure than in the middle of the war. I do not want you to think operational research is anything but common sense and the time to apply it—which the Services did not have in war-time. Then they pulled in the scientists, but in peace-time it is different. Operational thinking is nothing more than common sense and it is the job of the Services to do it.

As to how you find out how many of your six men you can get rid of and which, you must appeal to experiment; and if I may make a friendly comment I must admit I find the Army least experimental-minded. The Air Force, if we are to believe the papers, build three or four prototypes merely to see which is the better. The Army will no doubt educate me after this afternoon, but I do not recognize the same approach there. I think your last real experimenter was General Sir John Moore.

ADMIRAL OF THE FLEET SIR ARTHUR POWER: There used to be the Treasury trick which upset the Navy, Army, and Air Force before the scientists got into their stride—the 10-year rule. There would be no major war for 10 years; and every 1st of January the Treasury trick was trotted out. The result was that we never got anything.

Would you welcome the 10-year rule from the scientists' point of view, so that you would not have to produce anything for 10 years?

THE LECTURER: No. The Treasury 10 years is not my 10 years. Theirs amounts to an arithmetical alibi. They do not want to be bothered, so they say there won't be a war for 10 years. My 10 years is what the scientist calls the characteristic time-scale of research and development. I hope I have not given a false impression. I am not saying, "Go home for 10 years and see what it is like on the day." I am saying we must maintain continuous development, but we need not accept a 10-year scale for every consecutive step. My particular proposal is to overlap each 10-year plan by five years.

If I may criticize the Navy, I think you may be too loyal to your Treasury masters; since it takes 10 years to build a ship and equip it, the Navy has tended to think in terms of 10 years. But I think that every five years you should start up another 10-year plan; otherwise, there is bound to be a period of obsolescence.

REAR-ADMIRAL W. J. YENDELL: The period of 10 years is not quite right with the Navy. We have a factor of a ship lasting economically for about 20 years. Consequently, since modernization costs jolly nearly as much as rebuilding, we are apt to try to keep the things going for 20 years.

To go back to the 10-year and overlap rule, I agree entirely, because it is absolutely essential that the R and D or 'ideas' line should go along at at least the same speed if not faster than the production line. But you must have both.

My impression is that since the war we have rather tended, through, perhaps, political reasons, to say we will think of R and D and no production and then a little later we will think of production and no R and D, which I believe to be fatal.

I should like to take up one point, and that is your sly crack at staff officers who are apt to change their minds on their requirements. My impression has been that when you are about halfway through the development of a particular weapon or system, it is the scientist who tries to persuade the staff officer that if only he will drop that one which is halfway through he can have something very much better in five years' time. I wonder if you would like to remark on that aspect.

THE LECTURER: I should like to cross swords with you but I cannot, because I think you have properly described the situation. The trouble with the scientist is that in some ways he has been trained in irresponsibility. He can make his mistakes on a piece of paper and put them in the wastepaper basket and no one but himself is any worse off. The engineer, if he builds a bridge and it falls down, has had it. He is a much more responsible person.

I think we have tended to encourage the irresponsibility of scientists more than we should. We shut them away behind walls, pat them on the back, and say, "You are an amusing lot of people to talk to." We have something to put right here. We must convince the young scientist that he is occupying a very privileged position. He is, in some ways, equivalent to the mediæval monk. He is put away behind wals, protected from the hardness of life, the difficulties of argument with staff officers, and squaring the Treasury. All he has to do is to produce two or three developments or improvements a year. We are reluctant to tamper with this situation, because it is the scientist's innocence of approach, his ability to be surprised, that is his stock-in-trade.

This puts a big responsibility on his leaders, the directors of research at headquarters and the heads of establishments. We have to link the candour of the scientist with the consistency of the staff officer.

COMMANDER G. G. PUGH-COOK, R.N.: You yourself have referred to the numerical question in the scientific world in this Country and in Russia. I should like to ask the lecturer whether our defence scientists have considered the manpower question as applying to this point of maintaining the momentum.

THE LECTURER: There are two ways of looking at this. On the one hand, native arrogance may lead us to believe that the low living and high thinking which is characteristic of this small Country will, as I said earlier, allow us to outstare the tiger. I believe this to some extent, but I do not know how far we can go. If we were in a straight attritional military competition there would be no avoiding the fact that numbers do matter; numbers of technical school determines the number of university graduates and the number of university graduate determines the number of Nobel prize-winners. The escape clause, if my thesis is sound, is that war is not going to be fought on a quantitative basis in future.

AIR VICE-MARSHAL L. DALTON-MORRIS: May I refer to your remark about the relationship of the scientist to the Service chap at the beginning of the war? I think you said it was a little haphazard. I entirely agree, but during the war the relationship became a very firm partnership with the Service as the senior partner. Since the war, the partnership has continued, but I fear that the senior partner has become the scientist. This was all very well when we had scientists of the calibre of Sir Henry Tizard with his great operational flair and wide grasp of strategy. But there may come a time when scientists will come to the top, perhaps become chairmen of the D.R.P.C., with no operational experience whatsoever. I was wondering whether Dr. Cockburn thinks this will be a good thing or not.

THE LECTURER: Of course I do not, and, if I may make a personal comment, quite the happiest and most rewarding period in my career was the six years I spent with the air staff. I think that during the career of every scientist engaged on defence work he

should spend not just two or three days visiting the Services but actually live with them and try to get inside their minds. So should the Services get into the mind of the scientist, not to copy his techniques but to find out how his mind works. Now that the defence organization is stabilizing, the young scientist might well in the course of his career spend two or three years in discovering and understanding the people he is serving. I cannot accept Dalton-Morris's implied compliment. We are not, of course, the senior partners nor the junior partners. We are colleagues. We realize that we take our risks in the security of the laboratory. We must not forget that it is for the soldiers to go out and risk their lives.

One of the things one does not make enough allowance for is the factor of morale, Service morale. It is, perhaps, all very well for us to demand continuity of research in peace-time. But what is happening to the morale of the soldier is equally important. It does not matter how good your weapons are if the men are not good enough or keen enough to use them. You might as well never have designed them.

CAPTAIN E. A. S. BAILEY, R.N.: I should like to follow up the last question but one about manpower by asking what organization the Ministry of Supply has for recruiting their scientists?

THE LECTURER: We have, as you know, an elaborate recruiting organization, the Civil Service Commission, whose job it is to maintain the standards of recruitment at the proper level. But long before the young graduates have even begun to sit for their finals people are after them. Industry sets the pace. They start on their travels about February and we have been forced to do the same. Our senior people, project officers, directors of research teams, are encouraged to talk to the students and tell them the work they will be engaged on and what facilities are provided.

Although we have been through pretty difficult times in the last four or five years, my own feeling is that we have not come off too badly. We have our due allotment. We would like more and better people, but we realize that we are only one consumer of manpower. It would be fatal to this Country if we drained off too many of our best scientists into defence work. Defence is a necessity, but we should be foolish to pull all the best men out of industry, or out of the universities and teaching. Instead we want to get them to work together so that each knows what his colleague is doing and each appreciates the work of others. If we can get that integration going we can afford to be economical in the people we actually have in the defence organization.

MR. F. C. WATTS: During the discussion the scientists and the military Services have been considered to be two separate entities, collaborating certainly. But would not it be desirable that in peace-time the military Services extended their hand out more to their scientist colleagues and gave them more assistance? We know that the serving officer today is necessarily becoming more and more scientifically minded. Could we not use his knowledge and training?

THE LECTURER: I think this has to be settled by Case Law. We cannot have all the Services engaged on experiments at central flying schools. It is a question of deciding what is appropriate. My own experience is that any useful experimental investigation has usually been supported. We must be careful not to ask for special privileges as scientists. If we want facilities, we must justify them like anyone else.

I should like to make one point. In my view the level of experimentation, that is the proportion of Service effort put into opening up new military issues, is largest in the Royal Air Force. There is a good deal less in the Army, and I think the Navy is in between.

It is not for me to say who is right. But there is no doubt in my mind that there is this difference of approach in the three Services.

LIEUTENANT-COMMANDER D. W. WATERS, R.N.: You used the expression 'the stability of retaliation' as a result of the development of modern weapons. You suggested that as a result there would be peripheral wars only, but that because of the logistic problems these would be short wars; that the *levée en masse* was a thing of the past.

However, the view, as you said, that there would be short wars in the future is not a new one. It was the view in 1914 that weapons then were so destructive that the war would be over in a fortnight!

Thinking of the peripheral wars we have had recently, such as Korea and Malaya, we find that they are protracted wars though on a small scale. But there is another peripheral war which always causes me much misgiving, a war against our shipping at sea. If the enemy attacks our shipping—whose safe passage is essential for our survival—I cannot see that atomic retaliation is going to solve the problem of bringing the ships across. Moreover, it will provoke the very type of war we wish to avoid. It seems, therefore, that contrary to what has been suggested in the Press in recent years, maritime forces are still amongst the first requirements of this Country and of N.A.T.O. Perhaps you would like to express an opinion on that.

THE LECTURER: I may be straying slightly from the dogma which I absorbed while with the Air Force, but I think the Navy has been through a lean time, and that a change is coming.

In an all-out Armageddon, the fate of this Country is likely to be settled within a few days, and the slow accumulation of war material which was the main function of the sea in the last war would not seem to have any reality.

But if the knock-out war is unlikely because of the stability of retaliation, what other kind of wars may we have to fight? Peripheral wars yes, but there is such a wide range of peripheral war. It is certainly not feasible to retaliate with a hydrogen bomb because one of our ships has sunk in an unexplained way.

I think the pendulum is swinging in favour of the Navy as an economical peripheral force. It seems to me that a cruiser standing by in some harbour could have a more immediate effect than a jet fighter zooming at 60,000 feet. Only a mature nation can understand the implication of the jet fighter. If you have to impress less developed people it is perhaps better to go ashore in an armed pinnace. The light carrier with tactical rather than prestige aircraft may be the most economical and flexible way of providing local air support on the periphery.

But having said that, we must also consider whether we shall ever be involved in another death struggle for the security of our trade routes. If the war ever got that serious we should be in Armageddon. Where should the tacit bomb line be drawn for sea situations? I am sure there is the equivalent concept for the Navy to study. It may be that the bomb line is not simply geographical. If the Atlantic lifeline was being throttled by submarines the proper answer might be to deal with the submarine bases by nuclear attack.

It is not a question to which one can give a simple answer. I find it easier to see the logic of the air situation. The naval side will always be so complex and subtle that we have to leave it to the admirals.

THE CHAIRMAN: Dr. Cockburn has been very good about answering all these variegated questions. If I may put in one point, it seems to me that there is a slight confusion about scientists and engineers. You can go right from the quantum dynamics scientist and the scientific engineer and the ordinary engineer to the man who mends your car. They are apt to be confused in English terminology. I hope people will bear that distinction in mind.

I think we shall all combine in thanking Dr. Cockburn for this most admirable and stimulating afternoon, and I ask you to show your appreciation in the usual manner. (*Applause.*)

AIR CHIEF MARSHAL SIR JAMES ROBB: Before we disperse, after listening to this significant and encouraging talk by Dr. Cockburn, may I express on your behalf our hearty thanks to our Chairman this afternoon, Lord Cherwell, for honouring us by presiding. (*Applause.*)

DETERRING FUTURE AGGRESSION

By Admiral Sir Reginald A. R. P. Ernle-Erle-Drax, K.C.B., D.S.O.

IT has been pointed out by Rear-Admiral Sir A. Buzzard, Captain Liddell-Hart, and various others, that we badly need an agreed strategy which will fill the present gap between conventional war (non-atomic) and all-out bombing with nuclear weapons. Any future defensive war should in fact be 'graduated' so that the tactics and weapons employed meet adequately the scale of attack, in order to defeat each act of aggression in a minimum of time with the minimum of force necessary. It should be made clear to all potential aggressors that once an act of aggression has been committed, the United Nations reserve to themselves the right to take whatever steps may seem best to achieve that end. They would naturally use atomic cannon and atomic bombs if it seemed that they could not achieve success quickly without them. They would no doubt avoid the use of the hydrogen bomb unless the aggressor had attacked with such strength that victory appeared difficult without it. And naturally they would try the atomic bomb before using its big brother.

Taking Korea, the latest case of aggression, as an example, it would seem that no hydrogen bomb should have been necessary, but one or two atomic bombs suitably placed near the Korea-Chinese border would probably have compelled the ignominious retirement of the whole Chinese army. It is perhaps a pity that this was not done, for circumstances were well suited for such action. A large Chinese army had committed a flagrant act of aggression; in fact the Chinese Government, reluctant to take full responsibility, had described them as "volunteers." There was an ample area where such bombs could have been dropped without causing serious civilian losses, and there would have been no objection or difficulty in warning civilians beforehand that they should leave the selected area.

No one can make successful war without taking risks, and there was of course some risk that China or Russia might retaliate with similar bombs. Certain Governments, including the British, were unduly alarmed about this. They would not even agree to let General MacArthur drop conventional bombs on military targets north of the Yalu River, which, particularly if backed by a threat of atomic bombs to follow later, might well have ended the war and saved thousands of American lives. Similar action could have been applied to other cases of aggression in the past, if atomic bombs had been available. The German armies that invaded Belgium, Denmark, and Holland in the 1914–18 and 1939–45 Wars might have found it impossible to press on, or even to retain their conquests, if American atomic bombs and missiles were being dropped at intervals on their depots and lines of communications. And if the Germans had retaliated by dropping A or H bombs on the big cities of France, there would have been nothing left worth conquering.

The Italian invasion of Abyssinia could have been stopped at once by similar treatment, or by the bombing of their disembarkation ports.

In all these cases, if the atomic bomb had been available in time, such support would have immensely encouraged the defending armies and would probably have enabled them to resist with success.

It is desirable that the intended policy of the United Nations in these matters should be made clear to all the world. It is therefore suggested that the principal

Powers of the United Nations should meet together and agree on a statement of policy somewhat as follows :—

1. Unless forced by the enemy to retaliate, we repudiate all idea of murder-bombing on large cities.

2. We are willing to agree a list of all cities, in all countries, whose population exceeds an agreed figure of, say, 100,000. These cities shall be immune from bombing unless (*a*) an aggressor violates this rule, or (*b*) a particular town occupies a vital position in relation to the advance of an aggressive army.

3. The latter case would arise if the town in question contained a road or rail junction, aerodrome or supply depot on which the aggressive army is largely dependent for its maintenance. As a general rule the inhabitants would be warned before any such town is bombed, though for obvious reasons this could not be guaranteed in all cases.

4. We assume that, as with numberless cases in the past (Abyssinia, Austria, Belgium, China, Holland, Korea, etc.), any major aggression will usually be supported by an invading army. Our aim will be to exert against this army all the force necessary, and no more, to compel it to withdraw to its homeland.

5. Air or naval forces actively supporting the work of aggression will probably have to be attacked, but in every case we shall use no more force than necessary. When using nuclear weapons we shall hope to use only the atomic and not the hydrogen bomb.

6. We shall not use any form of biological or chemical warfare, unless forced by the enemy to retaliate.

7. We wish to make it clear that, using atomic weapons when necessary, the United Nations have ample power to enforce their decisions against any armed forces which attempt to invade or occupy some particular area. Admittedly there might be a limited number of exceptions to this rule.

8. We solemnly warn any nation found guilty of aggression that, if an agreement has been reached to forbid the bombing of large cities, they must, in their own interests, adhere to it with scrupulous care. Any bombing of such a city, even by accident, will call inevitably for instant retaliation ; and once started, limitation may be impossible.

There is then serious danger that the people of the aggressor nation would be exterminated by tens of millions.

No doubt the slaughter might extend on both sides till half the human race had been destroyed, but this would be no consolation to the nation whose aggressive action had started the trouble.

9. Obviously the simple, and indeed the only, solution is for every Government, in the conduct of its international relations, to make quite sure that it could never be branded by the United Nations as an aggressor.

The above statement of policy calls for a certain amount of explanation or comment.

Clauses 1 *and* 2. Agreement on these, and careful adherence to them, would save millions of lives on both sides.

The question has been asked " why 100,000 ? " But this figure is entirely a matter for the Great Powers, or the United Nations, to negotiate. If it is fixed too low, say 10,000 or 1,000, agreement would be most unlikely and compliance extremely difficult. The figure must be as low as possible, but 100,000 would be a useful first step, and agreement even on that, if carefully adhered to, would save millions of lives on both sides. Such agreement would not mean that we accept the bombing of smaller cities, for it is to be hoped that belligerents will usually have other targets of greater importance and will not wish to waste their major bombing efforts on a medium-sized town or city unless it chanced to contain some target of unusual military importance.

Clause 3. Sometimes, time is of such vital importance that, when events are moving swiftly, one cannot delay even for a few minutes. But in general it should be entirely feasible to warn the inhabitants of a frontier town some hours, if not one or two days, before bombs are dropped.

Clause 4. The size and strength of an invading army will largely depend on the strength of the defending forces that may be expected to resist it. If the strength of the invaders is small, the United Nations might be able to repel them with conventional weapons. If it is large, we may reasonably hope that there will be depots, aerodromes, or important points on its lines of communications where two or three atom bombs would cause complete disorganization.

Clause 5. Great care should be taken to use no bomb that is bigger than necessary, but the weapons used should be such as to show that the United Nations can and will obtain complete tactical mastery in the area under dispute. They should finish the job quickly and decisively, making sure that there is no repetition of the ignominious deadlock that continued for so long in Korea. It must be admitted that much depends on the exact area where the aggression occurs. Abyssinia and Korea were areas where we could have forced a favourable decision quite quickly. But if the area in dispute is fairly close to the enemy's main centres of military strength (e.g., suppose the Communist bloc attempted to annex Greece) there might well be a struggle, particularly in the air, that would approach the scale of a major war. The danger in such a struggle would obviously be very great.

This of course brings us to *Clauses* 8 and 9 ; *Clause* 9 being the only real solution of the problem. Indeed it may not be too much to say, that until this condition is universally complied with our civilization will be in grave peril.

There would be many advantages in a code of simple rules such as the above. It should be clear to any aggressor that, against the full strength of the United Nations, using nuclear weapons whenever they thought it necessary to do so, the prospect of success would be absolutely nil.

If he wished for a trial of strength on the biggest scale the aggressor could of course resort to all-out bombing. But this would put on him instead of on us the onus of initiating this form of warfare, and it would probably ensure a process of mutual suicide where tens of millions would be killed on each side.

It would seem that, even in dictator countries, public opinion, faced with this prospect, should be able to restrain an aggressive Government from such acts of madness.

Further, it should be possible to make good use of public opinion before the invading forces are set in motion. On any frontier where trouble is threatened there are bound to be towns with aerodromes, depots, road and rail junctions, etc., which

would be in grave danger of bombing when fighting started. On the first signs of possible conflict it should be the duty of the Secretary General of the United Nations to get in touch, by letter, telegram, or wireless, with the mayor and people of towns in the danger area. He should then convey to them a message saying somewhat as follows :—

> " From the unusual concentration of military forces along or near your frontier it has seemed to the Security Council that your Government may be planning to use them for some aggressive action. It is therefore my duty to point out to you that, if this were done, the United Nations would be likely to order punitive action against all forces that are moved across your frontier.
>
> " The precise action necessary cannot be foretold with any certainty, but there would obviously be grave danger that, to hold up aggressive movements, your town would have to be bombed. If the movements continued, or were strongly reinforced, it might even prove necessary to use atomic bombs, in which case the casualties in your town might well amount to 80 or 90 per cent. of the population. I would therefore urge you to exert all possible pressure upon your Government to ensure that they avoid any movements of military forces which might cause the United Nations to brand them as aggressors."

If some policy such as the above were to be adopted it is important to consider the probable reaction to it of an aggressor nation.

It is useful to note that Russia, in September, 1955, put forward the suggestion that atomic bombs should not be used unless an act of aggression had been certified by the Security Council. At first sight this would seem to indicate that, once an act of aggression had been established, Russia would be willing to support or approve the use of atomic bombs. Unfortunately however, she also possesses the power of veto in the Security Council and therefore could equally well prohibit their use for the whole duration of hostilities.

Once fighting began, if public opinion failed to prevent it, the reaction of the aggressor Government would be a matter of great importance.

His military leaders would at once say to their chief " You want victory: therefore we cannot be tied by these paper agreements about not bombing large cities. We want to bomb New York, Chicago, Pittsburg, and those large cities of Britain which contain some 80 per cent. of her population."

To this we may reasonably hope that their Government, or the Dictator in control of it, would reply as follows :—

" To such action we cannot possibly agree. We are engaged on a local aggression which you must win if you can, to give us possession of certain territories that we covet. But if you cannot win in that area you must give up and retire whence you came.

" We prohibit any wider extension of the conflict and any violation of the existing agreements about bombing. For if we violate them, our opponents may well resort to all-out bombing a few hours or even a few minutes later. If their principal target should be our great cities, tens of millions will die and those who survive may die later from disease or starvation.

" Even if the United Nations restrict their bombing to military targets, most of our biggest cities are liable to be attacked and many millions will certainly die.

" Such results, neither we nor our people can possibly contemplate."

If all our hopes of agreement fail it is of course possible, though not probable, that all-out bombing on both sides may ultimately result. But if so, we shall at least take much longer to reach that last and fatal stage in the conflict than we should if we adhere to the present plan whereby, as soon as anyone is attacked, we use nuclear weapons when and where we please without, so far as the public is aware, any limitation or restriction.

All the information we possess is the somewhat alarming statement made by Lord Montgomery in London in October, 1954, and never since contradicted, that ". . . . we at S.H.A.P.E. are basing all our operational planning on using atomic and thermonuclear weapons in our defence. With us it is no longer: 'They may possibly be used'. It is very definitely: 'They will be used if we are attacked.'"

But this is almost a policy of despair, for it is becoming increasingly evident that massive retaliation = mass-murder = mass-suicide.

It therefore seems urgently desirable to replace the present crude policy of massive retaliation with strategic and tactical plans designed to deal effectively with the many different types of aggression that may arise in the future. It would be interesting to ask our 'all or nothing' planners—" what precisely would be your proposed action if aggression, or heavy fighting, were to occur suddenly this year in Korea, the Formosa Strait, Indo-China, or the Middle East ?"

The Economist of 5th November, 1955, printed a well-reasoned article urging that graduated deterrence would be a mistake. But if this is ruled out, we are left with only two alternatives :—

Either aggression is *not* met with atom-bombs, in which case aggression probably succeeds and the United Nations forces are quite likely to be defeated, or, we let loose the hydrogen bombs and so destroy most of Britain and the whole of Europe !

Surely these are two very unsatisfactory alternatives ?

To conclude, it must be admitted that though graduated is better than unlimited retaliation, it can only be a palliative for a situation that ought never to arise. Serious danger exists as soon as the United Nations go to war with any powerful aggressor, and we therefore should not forget the grim warning given to us by that great historian Arnold Toynbee. His *Study of History* contains the record of some 21 civilizations which mostly have crumbled into dust. Our western civilization is now one of the few survivors and of this he says, in his Volume Six :

" If the analogy between our Western Civilization's modern history and other Civilizations' 'Times of Troubles' does extend to points of chronology, then a Western 'Time of Troubles' which appears to have begun some time in the 16th Century may be expected to find its end some time in the 20th Century ; and this prospect may well make us tremble. . . ."

" We cannot say for certain that our doom is at hand ; and yet we have no warrant for assuming that it is not ; for that would be to assume that we are not as other men are ; and any such assumption would be at variance with everything that we know about human nature either by looking around us or by introspection.

" This dark doubt is a challenge which we cannot evade ; and our destiny depends on our response."

It seems obvious that an adequate response would involve a detailed study of the whole problem by the peoples of the West, and an intensive effort—one might almost say a superhuman effort—to ensure that our civilization shall survive because it deserves to survive. Of any such effort at the present time there is little evidence.

Millions of people are occupied clamouring for higher wages, demanding strikes, or complaining about the 'differential' between themselves and other workers in the same or similar occupations. Many employers are no doubt being just as blind as their men. But surely they would all do better to consider the differential between their present standard of living (in most cases higher than ever before) and the Absolute Hell that they would descend to when the atom bombs begin to drop. Failing success in our other efforts for ensuring permanent peace, we might do well to recall that one of our bishops in 1939 said something like this: "our prophets today should be saying to all around them, 'Repent, for the Kingdom of Hell is at hand.'" He was right. Hitler let loose that Kingdom and, by a narrow margin, we survived. But next time there will be no certainty of survival, and we have no clear evidence that the general situation today is much more stable or secure than it was in 1939.

CANADA LEADS THE WAY IN TRI-SERVICE EDUCATION

By Wing Commander E. C. Snider, R.C.A.F.

IN Ottawa, on 30th May, 1947, the Honourable Brooke Claxton, Minister of National Defence in Canada, issued a directive which outlined a broad plan for the introduction of a revolutionary system of officer training in Canada. As an experiment all potential Regular officers for the three Services were to be brought together and educated on a tri-Service basis. The plan was put into effect in September, 1948, and after six years in operation had been so successful that Mr. Claxton stated, during the graduation ceremonies for the third course, that the tri-Service scheme was no longer experimental. By this time three Service colleges had been established in Canada—all were tri-Service.

The tri-Service scheme was the first drastic break from the traditional methods of officer training which had existed since Sir Humphrey Gilbert urged Queen Elizabeth I to found an institute of military science, nearly four hundred years ago :

> " Whereas in the universities men study only schole learninge, in this Academy they shall study matters of accion meet for present practize both of peace and warre."

Traditional Colleges

Military academies have generally been associated with one particular Service. Great Britain's Royal Military Academy at Woolwich, founded in 1741, and the Royal Military College at Sandhurst since 1802, have had continuous army ties. From 1905 the Royal Naval College at Dartmouth has trained officers for the Navy, and since 1920 the Royal Air Force College at Cranwell has been producing career officers for the Royal Air Force. France's Ecole Polytechnique, founded in 1794, and the Ecole Speciale Militaire Inter-Armes (St. Cyr) at Coetquidan have been operated for the Army, as has Belgium's Ecole Royale Militaire in Brussels. The Royal Military College of Canada in Kingston, founded in 1876, was basically an army college, although some of its graduates were able to join the naval and air forces of Canada and Great Britain. Some colleges such as Holland's Dutch Military Academy at Breda and the United States' Military Academy in West Point have, in fairly recent years, trained a portion of their output for the Air Force as well as the Army, but in each case this was only a compromise measure until the air forces could build their own academies. The establishment of a truly tri-Service concept where potential officers for the three Services were brought together to live and learn in the same school, wearing the same uniform in the same environment, was a new departure in officer training. Why then did Canada adopt this revolutionary scheme of cadet education ?

Tri-Service Co-operation and Understanding

Military authorities in Canada felt that one of the most important lessons of the recent war was the need for co-operation between the Services at all levels. There were many instances of co-operation at high level organizations such as the Combined Operations Headquarters (the first inter-Service inter-Allied headquarters in history) and the Supreme Headquarters of the Allied Expeditionary Force. There were also many examples of co-operation at the intermediate levels. But in Canada the belief was held that co-operation at the Chiefs of Staff and headquarters strata

would not by itself achieve the harmony in action which modern war demands. Only by understanding the roles, traditions, and problems of the other Services, by mingling and building up friendships with the other members of the defence partnership, could we obtain at all levels the co-operation which would cut across petty inter-Service jealousies and misunderstandings, and achieve the harmony in action which is so essential in modern wars.

Authorities in Canada felt that these lessons could be converted into action if a training scheme were adopted whereby officer candidates could be brought together, at the beginning of their careers, in one college. In this environment the young officers would learn about the other Services, make friendships, and gain understanding which would influence their entire careers.

The Tri-Service Scheme

In his directive setting up the tri-Service scheme in Canada, the Minister of National Defence stressed that " as far as possible, all officers in all three Services should have the same general education, the same environment, and receive approximately the same treatment with regard to dress, pay, seniority, and opportunities for promotion." In September, 1948, the first group of cadets entered the Royal Military College of Canada in Kingston, Ontario, and Royal Roads in Victoria, British Columbia, to begin the tri-Service experiment. The course was to take four years. For about seven months of the year the cadets would study in one of the colleges and for four months each Summer they would train with the Service of their choice. The experiment was successful and in September, 1952, a third college, Le Collège Militaire Royal de Saint-Jean was opened in Saint-Jean, Quebec. The three colleges became known as the Canadian Services Colleges.

The Canadian Services Colleges come under the jurisdiction of the Department of National Defence. The President of the colleges is the Minister of National Defence who is aided by an Advisory Board of prominent Canadians from the universities, from industry, and from the Royal Military College Club of Canada. Command of each college is rotated between the three Services. For convenience only, Royal Roads is administered by the Navy, Royal Military College by the Army, and Le Collège Militaire Royal de Saint-Jean by the Air Force.

The organization for the training of cadets is designed to develop a sense of responsibility, of fair play, and of fellowship. In the classroom, on parade, at games, and in other extra-curricular activities a cadet is given an opportunity to command, to learn the art of man-management, and to exercise his judgment. To this end they are organized into a wing of a number of squadrons, flights, and sections in which cadets from the three Services are intermingled. Each squadron has in its complement a balance of first, second, third, and fourth year cadets. This organization controls cadet life at the colleges within certain limits laid down by the commandants. Cadets of the graduating class hold appointments from wing commander to section commander and receive practical training in leadership by being responsible for the discipline, progress, and efficiency of their wing, squadron, flight, or section. They also organize and run the full intra-mural sports programme and carry out typical Service duties such as orderly officer and fire picquet commander. Every committee at the colleges handling cadet affairs has strong cadet representation. This gives the representatives an insight into the administering of sports and entertainments, and in the budgeting of funds.

Superimposed upon the cadet establishment is the organization of the Officer Commanding the Cadet Wing which monitors the activities of the cadet officers. The position of Officer Commanding Cadet Wing is filled on a rotational basis by one of the three Services. Serving officers head each squadron, supervising and assisting the cadet officers.

It can be seen that the young officer is given the opportunity to exercise command and to demonstrate leadership. From the very beginning of his career his command is of a tri-Service organization. He is exposed to tri-Service leadership and accepts the appearance and authority of officers from the three Services as an integral part of the military profession.

Entry to the Colleges

To enter the colleges an applicant must be between the ages of 16 and 21 and requires senior matriculation (approximately equivalent to the British general certificate of education, advanced grade). However, a cadet may enter Le Collège Militaire Royal de Saint-Jean with junior matriculation, but must take a preparatory course for one year to raise his educational standard to senior matriculation. Candidates appear before a selection board where their officer-like qualities are judged. They must be medically fit. If accepted the applicant must sign an undertaking with the Navy, Army, or Air Force, whichever he chooses, and is then enrolled in the Regular officer training plan. This plan offers the cadet a university education, starts him on full-time pensionable service, and entitles him to uniforms, board, and lodging, medical and dental care, and basic pay of $55.00 per month. About 40 per cent. of the cadets are from the Army, 35 per cent. from the Air Force, and 25 per cent. from the Navy. As a ' neutral ' uniform is worn at the colleges it is impossible to distinguish, visually, which Service the cadets belong to.

Academic Education

The directive from the Minister of National Defence stated that " the people who are going to be the staff, training officers, and senior executive officers in any future war, must have educational standards which will enable them to deal with the extraordinarily complicated weapons of the present and future, and also with the scientific and other technical personnel." To meet the educational standard which was required, the Director of Studies of the Royal Military College endeavoured " to build a tri-Service military educational establishment with a staff containing the best young military leaders the Services can provide, and have these young military leaders integrated with a group of Canada's best minds in arts, letters, science, and engineering." When this staff was subsequently formed the military instructors were accordingly integrated with the predominantly civilian academic staff.

The course during the first two years at the three colleges is the same for all cadets except that those planning to enter engineering take an additional course in engineering drawing. The subjects taught in these years include military studies, English, French, history, economics, mathematics, physics, and chemistry. The emphasis during this period is on mathematics and physics because of the importance of these two subjects in modern military science. The final two years of the course are taken at the Royal Military College in Kingston and here, in his third year, a cadet may elect to take the general arts course, a science course, or engineering. If he chooses the general arts course he may specialize in history, English, economics,

or politics. In science he may concentrate on chemistry or physics, mathematics and physics, or engineering physics. The engineering faculty offers a choice of civil, electrical, chemical, or mechanical engineering.

Military Training

Fifteen per cent. of the academic term at the colleges is devoted to military training which includes physical training, drill, and military studies.

In the course on military studies the aim is to impart a theoretical knowledge of the three Services. During each seven-month academic term all cadets receive from officers of the Navy, Army, and Air Force about 50 hours of military studies. In the first year a study is made of the early history of navies, armies, and air forces, the history of the Canadian Services, and the current broad organization and role of these forces. In the second term the cadets are introduced in broad terms to minor tactics of sea, land, and air warfare, the organization for national defence in Canada, and to the principles of war. The third year course covers the strategical and tactical employment of the armed forces, land/air warfare, Arctic warfare, weapons of the future, and Service writing. The emphasis throughout the course is on the need for tri-Service co-operation and understanding. The study of amphibious operations in the final year, therefore, forms a fitting climax to the military studies course. Throughout the course the cadets are also taught the fundamentals of an officer's responsibilities ; leadership, morale, discipline, mess etiquette, careers in the Canadian armed forces, and the rates of pay and allowances.

From May to August each Summer, the cadets leave the Canadian Services Colleges to join officer candidates from the university training plan, to train with their own Service. After a basic course the naval cadets go to sea where they learn the function of their particular branch of the Service afloat. Army cadets train with the corps of their choice. The Air Force cadets learn to be pilots, navigators, or technical officers. During Summer training cadets wear their regular Service uniforms, are treated as subordinate officers, and are given officer privileges.

Qualifications of Graduates

After successfully completing the four-year academic course and three Summers of training with his Service, the cadet is granted a diploma of graduation and receives a permanent commission as an acting sub-lieutenant in the Navy, lieutenant in the Army, or flying officer in the Air Force. In four years the Army and Navy cadets have been trained to a standard which qualifies them to take their place with their Service without further training. When the Air Force pilots and navigators have completed a course at an operational training unit they, too, are ready to join an operational element. However, cadets who have taken the engineering course are normally subsidized at a university of their choice for a further year to obtain a degree.

During the very important formative years of their lives the young officers have learned some of the problems, tactics, and roles of the three Services. They have made lasting friendships with others who, like themselves, will be the senior officers of the future—officers with whom they will someday be planning the defence needs of their country. They will be dealing with persons they have learned to work with in the seminars, laboratories, and class rooms, and to play with in the football and hockey teams, of the tri-Service colleges. In future years their conference room decisions will be based on mutual understanding—and trust.

The Progress of Tri-Service Co-operation Elsewhere

Before the 1939–45 War the activities of the forces in the United Kingdom were largely unco-ordinated. In the United States there was much inter-Service bickering. In fact it would probably be safe to say that petty inter-Service jealousies and misunderstandings existed in most countries. Fortunately, during the war inter-Service co-operation reached a very high standard, fostered mainly by such outstanding advocates of tri-Service unity as General Eisenhower, Marshal of the Royal Air Force Lord Tedder, and Admiral Lord Mountbatten. Although this co-operation has deteriorated somewhat since the war, some progress has been made.

The Joint Services Staff College, formed in 1947, has continued to function in the United Kingdom. An international, inter-Service Defence College has been established in N.A.T.O. The North Atlantic Treaty Organization by the nature of its command structure, and by regular exercises in which all Services participate, has done much to bring the individual Services closer together. At the lower levels some progress has also been made in countries other than Canada. In India, at the suggestion of Field-Marshal Sir Claude Auchinleck and Admiral Lord Mountbatten, a tri-Service wing where cadets of the three Services are trained together, was established on a small scale at the National Military Academy. In the United States, as in Canada and India, it was recognized that understanding must start at the beginning of an officer's career. In 1950, the Service Academy Board, of which General Eisenhower was vice-chairman, recommended that " Summer training programmes at Service academies should be arranged so that every student shall spend a minimum of six weeks in joint training with groups from the other two academies in practice manœuvres, using strategies, tactics, and weapons of all three Services." Unfortunately this recommendation was not put into effect. However, some progress was made toward achieving a better understanding of the other Services. In 1947, one of the missions of the United States Military Academy in West Point was " To instruct and train . . . (for) . . . a lifetime career as an officer in the Regular Army," but in the 1954–55 calendar that objective had been changed to read, " To develop in the cadet those attributes needed by a leader in the armed forces." A new aim was also added, " To give the cadet a basic education in the roles and missions of the combined arms of all the Services." In the new Air Force Academy too, the cadet studies " the equipment and techniques of all the armed forces of the United States."

Tri-Service Understanding in the Future

Warning notes are continually being sounded to the effect that understanding and co-operation amongst the Services must be improved. Field-Marshal Lord Montgomery, in an address to the Royal United Service Institution in London, stated, " During the war inter-Service co-operation reached a high standard. Since the war it has deteriorated . . . . We talk about the need for international unity and co-operation : we can hardly expect it if we ourselves do not give a lead with good inter-Service co-operation." The Duke of Edinburgh, in addressing the Combined Fleets at the conclusion of their exercises in the Spring of 1955, said that " greater co-operation and understanding was necessary in facing the problems of the atomic age."

As we move into this era of the great deterrent we will progress through the present sub-sonic bomber period to the supersonic stage eventually to be faced, perhaps in 15 years, with the threat of the intercontinental ballistic missile. The

roles of our forces will be adjusted to meet the new strategies which will evolve. What the new strategies will be is uncertain. What is certain, however, is that the new concepts will require the very highest degree of co-ordination of all our arms. Whether they operate from the air, land, or sea, our forces will have to work as a team. Victory, if there can be victory in a nuclear war, will be won in a matter of days. There will be no time to learn by trial and error what moves the other members of our team will make. The western nations must start now to make their defence teams work smoothly. From the very beginning of their careers the members of their teams must practice and think as a united military force—as the young officers in Canada's tri-Service colleges are doing.

FINANCIAL MANAGEMENT IN THE UNITED STATES ARMY

By Lieut.-Colonel M. L. Crosthwait, R.E.

SINCE the end of the 1939–45 War the U.S. Army has been increasingly critical of its management techniques. Vast sums of money were being spent on maintaining an army; men and materials were being absorbed at an unprecedented peace-time rate. In its attempts to persuade Congress that the money was both necessary and was being efficiently used, the Army found that facts and figures were often lacking. Where *did* the money go? How efficiently *was* it being used? The American concept of 'civilian control' gave impetus to this self criticism. This concept not only demands—as in any democratic country—that the controlling policies on the need, application, and size of armed forces should be firmly in political hands, but also that comprehensive guidance and co-ordination of all administrative and organizational activities should be a civilian responsibility at the top levels.

This has meant that a very large civilian element is to be found at Secretary and Assistant Secretary level in the Department of Defense. At the time of writing the Secretary of Defense had a deputy and ten assistant secretaries; the Secretary of the Army an under secretary and four assistant secretaries (financial management, manpower and reserve forces, civilian and military affairs, logistics, and research and development). When it is remembered that at this level appointments are political and therefore normally business men are prominently represented, it is not surprising that management in general, and financial management in particular, should come in for a critical scrutiny.

"Despite the vast size and the unique function of the Department of the Army, efficient management requires organizational structures and processes of control similar to those with which the business man is familiar. Clear lines of accountability are necessary if the Army is to get its job done economically and efficiently." So runs a quotation from the report of a committee under civilian chairmanship, set up in 1953 to investigate the Department of Army organization.

It is this background that has led to a considerable reorganization of the U.S. Army's management methods. A brief account of these methods is contained in this paper. It should be understood that some of these methods have yet to be fully implemented.

The Comptroller

Up till the end of the 1939–45 War, although many cost accounting systems were in operation, the background, training, and experience of the responsible army officers were often the basis for the conventional form of army management. Standards were based on personal experience, and performance was mentally measured against these standards. However, things are now more complicated. Something was required to replace and supplement mental standards. The difficulty was to establish methods by which results could be properly evaluated. A system was required so that a minimum of facts and figures could indicate accurately if the desired results were being efficiently and economically achieved.

Further, it is held, a commander should not and cannot closely watch all the activities under him. But he should be able to spot at once the exceptions—those that are not doing so well. It is possible, it is said, to identify such deviations by

setting up standards and evaluating performance against these standards. Thereby, not only fast identification of trouble spots is made possible, but the explanation for them, and the necessary corrective action, is indicated.

Accordingly, Congress directed that comptrollers should be progressively established in the Department of the Army, on the staffs of the chiefs of the technical services, and at all major installations and headquarters. The object of the comptrollership idea was to emphasize responsibility for financial management, and the effective and economical use of all resources. The job of the comptroller was to develop or apply methods by which operating efficiency could be appraised, to develop the annual installation budget, and to conduct internal audits of the installation activities. Although the staffs of the comptroller are largely civilian, the comptrollers themselves are often uniformed officers.

An important part of the comptroller's duties at the installation level is manpower control. Included here are advice to the installation commander on methods of affecting manpower economies, determining the accuracy and validity of justifications submitted in support of requests for extra personnel, and to detect flaws in methods and procedures. The comptroller's staff normally includes a manpower control officer, who is a specialist in evaluating work loads and manpower needs.

It is not suggested that all this is particularly novel. The need for economies in manpower and expenditure is recognized in every army. The introduction of comptrollers with skilled staffs, accompanied as it has been by the setting up of special courses in management for officers of every seniority, is an attempt to formalize the need and to ensure that modern management techniques are properly and efficiently applied.

The system is open to criticism, and has been much criticized, because in many cases it has necessitated some increases in staffs. However, it is held that only by having a staff section that spends its full time on searching for the cheapest, quickest, best, and most practical means of bettering management, will such improvements be made. Operating officials do not have the time to devote to management improvement. They may have the ideas—but not the time to develop them Hence the presence of comptrollers and staffs is justified.

The Army Primary Programmes

The U.S. Army in the past has been accused of inefficient methods of determining requirements. In order to eliminate shortages excess equipment has often been poured out. It has been realized that if the Army's management is to be effective, improvements must be made in the processes by which work and activities are programmed and controlled, and by which financial resources are budgeted and accounted for. Conversely, there should be means of measuring the effectiveness of every organization responsible for a segment of the Army's mission.

One of the troubles in the past was that there were over 30 different accounting systems. Data derived from them has often been irreconcilable, so that supervisory officials have been unable to extract the facts needed for planning, surveillance, control, and decision making. It has not been possible to look at the Army's activities, or groups of related activities, as a whole to see if the final results are commensurate with the resources committed, however efficient individual activities taken by themselves may be. The solution has been to divide the total management function—the co-ordination of the various internal activities by which the ability

and readiness to perform tactical or other missions is created or maintained—into a series of primary programmes. These programmes relate *all* the activities which contribute to a particular objective—training, for example—under one head, in the same way that a plan for a particular operation or campaign will deal with everything—troops, objectives, logistics, etc.—which are needed to mount the operation.

These programmes are listed in Table A. An integrated system of accounting will further ensure that the cost of each programme can be properly related. The Army will then know exactly how much each of its basic objectives is costing, and whether resources are being reasonably allocated between them.

Each programme establishes quantitative and qualitative goals for specific army functions during a fiscal year. They establish priorities, standards, and policies. They do not say how the programme is to be accomplished.

TABLE A

Programme No.	*Title*	
1.	Troop programme	Controlling programmes
2.	Material programme	
3.	Installations programme	
4.	Command and management	Derivative programmes
5.	Manpower	
6.	Civilian personnel	
7.	Training	
8.	Industrial mobilization	
9.	Procurement	
10.	Supply distribution and maintenance	
11.	Services programme	
	(*a*) Administrative and protective services	
	(*b*) Welfare and morale	
	(*c*) Logistic services	
	(*d*) Finance and audit services	
12.	Construction	
13.	National Guard	
14.	Army Reserve and R.O.T.C.	
15.	Intelligence	Special purpose programmes
16.	Research and development	
17.	Joint projects	

NOTE : Controlling programmes cover a span of five years and are not funded directly.

There are three phases in the use and application of these programmes :—

(*a*) Programme development. The mission assigned to a command, etc., must be studied, work to be done established, and objectives formulated.

(*b*) Programme execution. The year's goals are broken down into monthly and quarterly targets, resources are distributed according to objectives, necessary changes are made to assure a balance between objectives and available resources.

(*c*) Programme review and analysis. This is the audit stage. Planned objectives are compared with results achieved and investigations made as to whether tasks could have been carried out more efficiently.

Again it is not pretended that there is anything particularly novel in the principles underlying all this. The problem is, however, being approached in a different way, and functions are to be planned and executed under a formal system. All expenditures relating to a particular goal will be listed under one head, a far preferable system, it is held, than listing expenditures under a series of more or less unrelated items.

Financial Management

As already stated, the chief means of appraising programme results will be by making use of integrated accounting methods. The financial management system will provide for translating plans and programmes into financial terms, for recording and reporting financial results of operations as they occur, and for placing financial responsibilities at the point where operations take place, i.e., a commander responsible for certain functions will be furnished the funds and made directly responsible for their proper and economical use.

This last point is of particular importance. In the past the higher headquarters has normally estimated the yearly financial requirement to run a particular installation or organization, and after various adjustments, a yearly appropriation was made. It was then only up to the commander concerned not to overspend that appropriation. There was no encouragement to hand back money at the end of the year, and if activities towards the end of the financial period had to be curtailed, parsimony in initial allotment of funds rather than possible inefficiency in administration was the offered, and generally accepted, excuse. It is intended to change this and put the onus on the operating agency to keep costs down and to justify in detail financial inability to meet commitments.

Other aspects of the conventional accounting system can be briefly stated. Property was usually accounted for in terms of items rather than dollars. Accounts were normally developed on a cash basis, i.e., transactions were only recorded on the actual receipt or disbursement of cash. Costs of current operations included obligations for materials or contract services which might not be furnished or consumed until a later period. Payments for equipment that could be used for a number of years were often included under current costs. Supplies and equipment provided 'free' by one of the technical services—quartermaster, etc., were often not included in 'costs' even though they might form a significant part of the resources used. In fact, it was very difficult to discover true costs of current operations and values of inventories.

The present plan is founded on the principle that each installation commander should be provided with the funds necessary to acquire resources (men, materials, and facilities) to perform his tasks, and that he is held strictly accountable for the judicious use of these resources.

The following is a good example of a facility which was formerly provided 'free,' but now must be paid for. It is taken from the Post Office, for not only is the example generally relevant to the Army, but it also illustrates how all Government departments are adopting the new accounting methods where applicable. Formerly a local postmaster in need of delivery vans ordered such vans from the motor pool and if they were available they were produced. The only measure of efficiency was that the postmaster must arrange his activities within the resources of the motor pool, and that the motor pool should keep as many vans on the road as possible. Now the postmaster will be billed for the use of the vans and must pay for

them out of current expenses, the motor pool financing itself out of these earnings. If the postmaster orders a van and it is not efficiently used, he has wasted his money. If his allotment for ' hiring ' vans becomes exhausted he must ask for further funds. In justifying his request, the attention of higher authority will automatically be drawn to the apparently high cost of vans (the initial allotment is a ' standard ' by which subsequent performance is measured and compared with other localities). If this allotment is proved to be too small—well and good. If apparently large enough, comparing favourably with funds which others find adequate, an investigation ensues. The high cost may be due to inefficient operation or to a badly managed motor pool whose ' hire ' charges are too high.

The net result is that there will be a close financial control on the use of vans ; cost consciousness on the part of all concerned ; a ' standard ' by which operations can be judged and efficiency *and* cheapness will be stressed.

The accounting systems when fully integrated will give an overall view of programmes and activities, progress and trends will be apparent, and investment in inventories and property will be easily checked.

The principal elements in the financial management plan are detailed in the following paragraphs.

Financial Property Accounting

This is defined as the establishment and maintenance of property accounts in terms of dollars as well as quantities. The chief advantage in accounting for inventories in dollars is that a multitude of individual entries are reduced to a common denominator. Dollar amounts can then be used as an easily understood and ready method of abstracting data and for reporting progress.

Decreases and increases, consumption rates, frequency of shipments and consequent effect on shipping costs, overall losses, the rate at which property is becoming unserviceable, whether stocks are in balance with those in other types of depots, etc., etc., these are among many uses which can be discussed and analysed in terms of cash, but only clumsily and often incomprehensively in terms of items. In addition, financial property accounting develops a keener awareness on the part of inventory custodians as to what holding unnecessary stocks, or losses, or deterioration, mean when results of such actions are presented in terms of actual cost.

Finally, financial property accounting is also necessary as an adjunct to other aspects of the accounting system.

Stock Funds

The army stock fund is a ' revolving ' fund of working capital, which finances the acquisition, holding, and issue of common use and standard-stock types of material, supplies, and equipment. Supplies are first bought from industry or army-run plants and then ' sold ' to user organizations.

The acquisition of inventories and reserves is made from the working capital when the fund is initially set up, otherwise if supplies are being correctly planned and processed, ' outgoings ' will be smoothly and evenly balanced by ' incomings. ' If not, it means that some supplies are being procured and held in stock, thereby possibly unnecessarily adding to the planned level of inventories, and thus subtracting from funds available for further procurement.

Besides providing a relatively simple means of consolidating the management, financing, control, and accounting for procuring and holding supplies, stock funds

serve several other purposes. As long as yearly appropriations are forthcoming for the user organization—that is, ' incomings ' are maintained—the stock fund does not die at the end of each fiscal year, as being of a revolving nature outgoings are being replaced by incomings in a continuous process. Thus obligations at the end of a fiscal year merely to use up available appropriations are avoided. As money is always on hand, purchases of stock fund items may be timed to take advantage of favourable prices, and are not confined to certain periods during the financial year. The fact that financial control is exercised over both the initial procurement of requirements as well as their later consumption is also an additional way of engendering cost consciousness.

The stock fund presupposes that consumers have money with which to ' buy. ' This aspect is discussed later under consumer funds.

The Army Industrial Fund

This fund is designed for the operation of industrial type installations, such as an ordnance arsenal, a workshop engaged in the overhaul and reconditioning of major equipments, etc., and operates in a manner similar to the stock fund. An industrial installation will be given so much money to finance its operations and thereafter by ' selling ' its product to users or consumers it must be self supporting. The installation will be solely responsible for buying its materials, supplies, labour, and other services it needs.

Operating under the industrial fund will give every incentive to the installation commander to run an efficient business—as measured in terms of operating costs, output per man hour, etc. It is as near as the Army probably can get to applying the profit and loss motive of industry to army operations. The system must be contrasted to the old system of appropriation accounting when the total money for a given task was first estimated, then appropriated, then obligated in phases as necessary, and finally spent. This system encouraged the full spending of all moneys appropriated. If the appropriations were not enough more were applied for. If this was refused partial shut-downs or cutting of output was blamed on lack of finance rather than on possible inefficiency. Often it was difficult to prove otherwise.

Under the new system you have to ' sell ' your production. But consumer's funds (see next section) will not be unlimited and therefore the more costs are kept down the more likely will full production be maintained. Inventories must be capitalized. Initially there will be so much cash and so much inventory to run the installation. If inventories are not used, or are kept too high, there may not be enough money to keep production going. Inventories then have to be worked down to a reasonable level or disposed of as surplus for cash.

There will be no question of the rush spending of money at the end of the financial year. Every penny saved means lower costs. This not only encourages ' consumers ' but works up the efficiency of the installation to the credit of the officers concerned. Competition between installations concerned with similar production is maintained, and finally the aggregate of lower costs means lower budgets for the Army, which is the overall object of the plan.

Consumer Funds

Both the stock fund and industrial fund rely on the customer, or consumer, to buy the product, thereby reimbursing the fund concerned. Under consumer funding each ' consumer commander ' will be provided with funds for the costs of

operations over which he has control. Some costs, such as military pay, will be recorded on a statistical basis for reporting purposes only, but ' free issues ' must now be paid for.

Perhaps the term ' commander ' needs some clarification. Between individual units and the big installations or organizations, which are primarily concerned with the industrial and stock funds, there are a host of middlemen. Garrisons, posts, sub depots, headquarters—these are the type of activity which will be effected by consumer funding. At present funds are made available to a post or garrison, for instance, by separate allotments for civilian pay, local procurement, travel, etc. Yet other items are obtained by ' free ' issues, which have already been referred to. Overspending in one fund cannot be made good by savings from another. The commander has no incentive to ' save '—and normally attempts to use up all funds made available to him by the end of each financial year, whether it is necessary to do so or not.

Under consumer funding all goods and services obtained must be paid for. The same incentive to operate as cheaply as possible is present as with the other funds. Costs of various activities, which the commander can be called on to justify, will be more easily ascertained and analysed. There will be more flexibility in the application of funds, although complete freedom to switch funds from one activity to another will only be allowed in the long run. Budgeting will normally be done on a programme basis, and while flexibility will be possible within programmes, initially money will not be switched between them.

Consumer funding will permit the Army, at the installation level, to bring financial responsibility into harmony with operating responsibility. It is hoped that it will go far to engendering cost consciousness to all levels.

An Integrated Account

Finally, an example of an integrated account for a special activity is shown at Table B, together with some of the pointers which can be obtained from it.

Table B

Programme Activity *Programme Phase*	*Basic Training* *Replacement Training* (*in millions of* $)
1. *Direct costs*	
A. Military personnel	$42
Subsistence	7
Clothing and unit equipment	4
Travel	3
Other...	0.1
B. Matériel Costs	
Ammunition...	40
POL	6
Other...	2.5
C. Total direct costs	$104.6

2.	*Indirect costs*	
	A. Medical and dental	$12
	B. Communications	1
	Transportation Corps services	1
	Quartermaster Corps services	1
	Maintenance services	1
	Administrative services	1
	Repairs and utilities	1
	Total indirect costs	$18
3.	Total basic training	$122,600,000

What could the above account indicate ?

1. Same training this quarter but costs down. Why ?
2. Can these savings be permanently effected ?
3. Are other savings possible ?
4. Can maintenance costs be cut, i.e., is maintenance of a piece of equipment, which should last another five years, costing more than a new replacement, etc., etc. ?

Conclusion

There seem to be four main objectives of this financial management programme. To present to Congress the main logistic and training missions of the Army and their cost under sharply defined and understandable headings; to improve methods of control and management throughout the Army by having a common accounting system; to lay down standards against which performance, costs, and trends can be measured; and finally to make the whole Army more cost conscious by having a financial system which encourages saving, unlike the old system which merely encouraged the full spending of all appropriations.

It should not be construed that these methods have received unanimous approval. There are many critics. Critics stress the need to increase the already sizeable staffs, giving further opportunities to ' empire build.' The skilled accountants and budget analysers necessary to run the system will be hard to come by. It is acknowledged that attempts to use resources efficiently are laudable but, it is suggested, the system will inevitably treat the reduction of cost as an end in itself. Further it is futile to attempt to measure the efficiency and effectiveness of an army in the field in terms of dollars. Critics, too, wonder whether these grandiose ideas of decentralizing control on the spending of money will be sincerely practised, and whether operators will ever really be allowed to run their own finances.

Despite the critics, the new system is under way. Management courses, to an extent unheard of in the British Army, are being run. The U.S. Army intends to find out whether it is possible to provide for an army the same incentive as profit and loss provides for industry, and at the same time to leave combat efficiency unimpaired.

Much of the background for this paper has been obtained from material given to students at the Army Command Management School, Fort Belvoir, Virginia.

JAMES MURRAY: SOLDIER OF FORTUNE

By Humphry Bullock

JAMES MURRAY from Massachusetts, the first known United States citizen to die in India, was one of only two Americans who in the XVIIIth Century fought in the armies of the princes of Hindustan. Unusual again is the fact that he was one of the very few soldiers of fortune who did really make a fortune from that precarious calling. Moreover, he was admired as one of the most accomplished swordsmen and the best horsemen of his day in that country. A gallant cavalry leader, he knew how to direct artillery as well as to lead a charge. At the risk of his own life, in a daring and successful coup he saved the lives of a party of fellow adventurers, though they were his enemies. Not once, but twice, he broke through the hot fog of battle to bring victory by a sudden decisive stroke. Yet who today remembers this man of many talents and rare accomplishments ?

Nearly all we know of Murray comes either from the brief inscription on his tombstone in old Calcutta or from the recollections of a British ' free-lance ' who had fought against the American when they served rival Maratha princes and had afterwards led irregulars with him under the British flag. Almost nothing is found about him in books on the white soldiers of fortune ; they hardly mention his name.

He was born at Newport, Mass., in 1771. That is all we know about the first 30 years of his life, and he died at 35. Perhaps he was drawn to the Orient by hearing of the prowess of another man from the Bay State, John Parker Boyd, who from about 1789 to 1797 was in the military employ of three successive princes. Perhaps he was a seafaring man who, arriving at an Indian port after a wearisome voyage was dazzled by tales of the glittering prizes which lay ' up the country ' ready for those who had the enterprise to come and grasp them. We do not know, perhaps we shall never know. All the officers in Boyd's private army are said to have been British, but the expression may have been loosely interpreted to include anyone born in the former colony. Indeed, two distinguished officers then serving in India, Samuel Auchmuty, of King George III's army, and David Ochterlony, of the East India Company's forces, had been born in the United States and were descended from Scots settlers in Boston—as Murray may have been.

For the telling of James Murray's story there is no need to outline the complex wars and alliances, the shifting plots and counterstrokes, the smooth treaties and sharp feuds, which passed so swiftly across the Indian scene a century and a half ago. It is enough to know that a great part of the Indian sub-continent was dominated by the Marathas, a martial and ambitious race whose overlord was the Peshwa of Poona and whose foremost chieftains were the Maharajas Scindia and Holkar. When Murray first appears on the stage in Hindustan in 1801, Scindia and Holkar, usually allies, were fighting it out in central India, each with a large, fluid oriental-style army reinforced by a hard core of Regular troops, disciplined and commanded by white and Eurasian officers—mostly British and French—organized on the western model and possessing a complement of artillery manned by white and half-caste gunners.

In the Summer of 1801, just after the monsoon downpours had begun, Scindia's forces started to advance upon Holkar's capital at Indore. The Regulars went first as a spearhead, and the spasmodic manner of their dispatch bore witness to Scindia's mounting apprehension, for instead of keeping them together, compact and

manœuvrable, he sent them off in a string of small columns at two or three days' interval. First went four battalions led by a Major Hessing, son of an old Dutch 'free-lance' by an Indian mother. Their slow advance over rain-sodden country led Scindia to follow them up with two more battalions, and three days later with a third column under a French captain.

Holkar from his defensive concentration at Indore was quick to see his enemy's weakness. By-passing the first brigade, he fell on the second column and forced it to surrender. After a temporary check, his next sortie was again successful, for on 2nd July, 1801, his Regulars under Major Plumet, a Frenchman, met and utterly defeated Hessing's troops, killing eight officers—all British—out of 12 and wounding and capturing three more. Hessing alone escaped by deserting his command and galloping away.

James Murray must have taken part in one or more of these engagements, though we have no particulars of his share. For, three years afterwards, he told William Long (whom we shall shortly meet) how Holkar had taken prisoner a Captain Adkins and several other white officers of Scindia's and had determined to put them to death in cold blood. (This was no empty threat, for later Holkar did have three white officers executed after their capture.) Murray, then in Holkar's army, expostulated, but to no avail. At last he drew a dagger on the Maharaja and the lives of Adkins and his comrades were spared.

Murray's act would normally have meant instant death at the hands of the courtiers and bodyguards around the prince. How he extricated himself alive we do not know ; but it is curious to note that he was not the first white officer to offer armed violence to the Maharaja and live to tell the tale. In 1798, Holkar's Regulars were commanded by a British colonel, William Linnaeus Gardner, who was once, in full *durbar*, accused of treachery and grossly insulted by his Maratha master. "I drew my sword instantly and endeavoured to cut His Highness down," wrote Gardner in his memoirs, "but was prevented by those around him ; and before they recovered from the amazement and confusion caused by the attempt I rushed from the camp, sprang upon my horse, and was soon beyond the reach of recall."

However Murray managed to escape death, it was clearly impossible for him to continue in Holkar's employ ; and it must have been now that he transferred his sword to Scindia. Acceptable in the shortage of white leaders caused by recent casualties, Murray would be all the more welcome because of his exploit at Indore. In Scindia's army he remained until the Autumn of 1803. Then, as hostilities were imminent, the British broadcast an offer of pensions to all Maratha officers who would quit the princes and come across and Murray, in common with most of his comrades, responded. His pension, 400 rupees a month (then about $200) was larger than most ; and as these stipends were assessed according to the relative importance of the posts which their recipients had held in the Maratha Army, he must have risen fairly high among his fellows during his short service. What is more, he had amassed a fortune of about $100,000, and very few of the military adventurers had saved anything at all.

In the war that followed the British swept the main Maratha armies before them, but found themselves left with a substantial residue of trouble which took them two or three years to clear up. Fighting continued in widely separated areas against forays by freebooters and others who took advantage of the disturbances to gather booty or gain territory. Soon the British raised numerous corps of irregulars, horse

and foot, to meet their greatly increased commitments ; and to officer these they drew on the more competent of the former Maratha soldiers of fortune, especially those who were of British origin. Among them was Murray, who thus became the first and apparently the only U.S. citizen to hold a combatant commission in the East India Company's army.

From now on, for a year, we possess material as abundant as it was previously scanty. The spotlight thrown on the American's personality and adventures between September, 1804, and September, 1805, comes from Captain William Long, of whom we have made passing mention. An Englishman born in the same year as Murray, 1771, Long served as midshipman in the Royal Navy before going to India. He joined Scindia's army, but quitted it in August, 1803, in return for a pension of 200 rupees monthly. In 1839–40 he published his recollections in a long-defunct Calcutta magazine, the *India Review*. They are garrulous and ungrammatical, full of non-sequiturs and ambiguities, sentences which end in the air, and moralizings to edify the reader. Yet with all these exasperating faults they rank high as a historical source, for few of the military adventurers could handle a pen with a fraction of their skill with a sword ; and close-ups of the vicissitudes of a 'free-lance's' daily life are hard to find. Since Long was for this eventful twelvemonth the only other white man in the regiment commanded by Murray, he does much to illuminate his chief. One caveat is necessary. The two men quarrelled and never made it up, and this may have coloured Long's writings later, though he seems to be fair enough and often praises Murray's character and actions. When Long speaks well of Murray we may accept his opinion without hesitation ; when he blames him we should be cautious.

The regiment to which the two were posted was the Shekhawati Local Horse, raised on the borders of Rajasthan to the south of Delhi. They were soon in trouble. Many of the rank and file thought that they had enlisted only for local service in the neighbourhood, and when orders came for the corps to march away and cross the river Jumna they were loth to obey. Murray's resourcefulness saved a dangerous situation. A restive baggage-camel resisted all attempts to get it on to the ferry-boat (Long hints that the camelmen shared its sentiments and were not trying very hard to urge it aboard), when Murray drew his sabre and cut off its head at a blow. Brandishing his bloody weapon aloft he cried, "*Boat !* Or you will all suffer ! "—and instantly his troopers 'boated'.

Crossing the Jumna about 1,200 strong, the regiment was soon engaged on duty escorting treasure convoys from place to place. Within a few days Murray revealed to Long that he had discovered a plot among their men to mutiny, seize the treasure, and decamp to join the enemy after murdering their officers. As a test of loyalty Murray ordered the regiment to arms. Some obeyed : most paid no heed. After a sleepless night on watch the American captain led the faithful minority in a charge against the mutineers and killed several, the rest deserting to the enemy—who was Holkar, Murray's old employer. Only 400 troopers were left of the 1,200, but this remnant was staunch.

In this reduced state the Shekhawati Horse came in full view of Holkar's Army across the river, advancing to lay siege to Delhi. "We marched parallel in sight," writes Long, "the enemy to the tune of drums and fifes and we to the sound of the kettle-drum. Holkar's forces consisted of seven standards, say 20,000 infantry and upwards, and a hundred and more pieces of artillery, with some thousand horse. Luckily for us there were no boats for them to cross in and the Jumna was not fordable." They bivouacked at Shahdara, opposite the great Red Fort of Imperial

Delhi, whence they had a grand-stand view of the onset of its investment. It was 2nd October, 1804, and that afternoon Murray and Long watched through their telescopes the decayed walls of the citadel and palace of the Mogul Emperors flying in every direction from the fall of the enemy's shot. Did Murray realize that at the head of the city's defenders was another Massachusetts-born soldier, David Ochterlony, colonel in the Company's service?

There was nothing the little band could do but find a strong position where they could meet the challenge of hostile attack. Allegiances were wavering, and many a local chieftain, though still professing sympathy with the British, was moving about with his clansman to seize chance spoils of war. In their wanderings of the next few days the Shekhawati Horse encountered more than one roving band, but Murray adroitly avoided a clash of arms. At length they reached a small fort where a Company's lieutenant was isolated and in sore straits. Communications with Delhi were severed, he had run out of funds to pay his troops, and his authority had ceased. Murray came to the rescue by lending him money out of his own pocket to satisfy his sepoys' arrears, punishing those who had defied him, and staying to support him. There, in the middle of October, they received a letter from Ochterlony to announce that the siege was raised and that if they were in the land of the living they should march on Delhi with all possible speed.

Mounting at once, they rode through the night. At ten o'clock a Maratha chief obstructed their passage and threatened to open fire, but the American bluffed his way past. Their next stop was at a village where they had been molested by rebels a fortnight before. Now able to enforce his authority, Murray punished the ring-leaders for taking up arms against the Company. But here arose the first of the quarrels between the brother-officers. The American, Long tells us, proposed to loot and raze the village and put its inhabitants to the sword, judging that they merited condign punishment: Long urged mitigating circumstances and less drastic action. Finally Murray offered to take the whole responsibility and share the loot. After hot argument Long's views prevailed but, as he tells us, "our intimacy was cut, as he stated that I had debarred him from making his fortune, which . . . he was willing at all times to share with me."

Murray's was a restless spirit, as Long's reports of their conversations show. "You talk of moderation: I never knew a moderate man worth anything," he would remark; or at breakfast, "I was fighting with the devil most of the night: I must have pummelled him well: he got the worst of it." Once "he got cherry merry over the bottle with an old crony of his"; but this is the only mention of excessive conviviality and there is no suggestion that Murray's idiosyncrasies were alcoholic in origin. No psychologist, the Englishman put down his commanding officer as "crazy brained," the author of "freaks many and great," yet "in more calm moments he would often say, 'without God we can do nothing'."

At the end of October the Shekhawati Horse joined the Grand Army under General Lord Lake in its northward march from Delhi. Before they had gone far Murray accidentally dislocated his right arm and wrist and though he remained with his corps he had to entrust the active duties of his command to his lieutenant, while he rode on "a splendid huge elephant of enormous size with a silver howdah and gold-embroidered trappings, a leviathan of a beast," to quote Long's enthusiastic description. A month later their brigade had a sharp meeting with the redoubtable Sikhs of the Punjab. At the height of the battle Long in his turn was disabled by an accident and "although very unwell, Captain Murray offered his services to guide and point

the artillery," which had no officer of its own. " After the fourth or fifth shot the Sikh chief's elephant went tumbling over and the Raja was said to have been killed. Confusion seized the enemy's flanks, or rather masses, and they began to disperse." So in this, the first set battle between the British and Sikh nations who were to meet again on many a hard-fought field, the daring and skill of a citizen of the United States turned the scale to victory.

In March, 1805, the regiment found itself near a ford over the Ganges where Holkar's adherent, Amir Khan, the dreaded leader of the Pindari freebooters, was reported to be lying in wait. They passed across in safety and the officers mounting the elephant pushed ahead at a great pace to reconnoitre. Soon they saw smoke rising at many points to their front, then flames, and as they neared the villages they found that they had been set on fire by the Pindari host. " This is certainly Amir Khan, my old friend," exclaimed Murray, " let me mount my charger and bring up the corps in fighting trim—we have no time to lose—while you keep a good look-out on the elephant." Seeing the regiment's bold advance, the enemy halted ; and Long took the opportunity of observing as much of their dispositions as he could. Meanwhile, Murray led his men into a partially fortified village where they discovered three swivel-guns, a welcome addition to their armament. The dismounted troopers were posted around the parapet walls, seven or eight feet high, with horses and baggage under cover in the village huts. At first Amir Khan's forces advanced cautiously, but by nightfall they had completely surrounded Murray's position, with six or seven thousand men packed six deep outside the perimeter wall and ten or twelve thousand of Holkar's best cavalry in support in the rear. In the light of the full moon the two white officers stood on guard the night through.

Between eleven in the morning and three in the afternoon of the next day the Pindari hordes made 13 separate, determined, and unsuccessful onslaughts, and Amir Khan himself . . . " a sallow, cut-throat looking fellow, as ugly as sin " . . . was clearly visible through the telescopes. " We had pitched our tents at the suggestion of Captain Murray as a demonstration of our determination to sell our lives dear. No doubt the wily chief understood this sign, and on his part left no exertion untried to carry his point by repeated supply to his divisions of attack with fresh troops. The last attack was headed by his nephew and was a very bold one. Captain Murray shot this chief as he was leading his troops to mount the parapet, and the assailants, having lost their chief, went to the right-about." As Long justly states, " it was one of the most brilliant affairs during the war, and of the greatest odds in numbers, Amir Khan's forces being more than 18,000 and the horsemen under our command being only 800, armed and equipped in the same manner as the enemy." And once again a well-aimed shot of Murray's had brought down the opposing leader at a crucial moment and turned the tide of battle.

The Summer's intense heat drove British and Maratha armies alike from the field of action to shelter from the sun. The Shekhawati Horse went into a tented camp and were augmented by a complement of light infantry and artillery so that their total grew to 2,000 of all arms. The breach between the American and the Englishman had been widened by a further estrangement over the sale of a horse, the details of which are too petty to revive, and Long had for some time entertained the hope of receiving a separate command of his own. In September, 1805, his ambition was realized and the two men parted, never to meet again.

James Murray soon left the Grand Army too, for he had resolved to return to his native land. Making his way to Calcutta he invested the greater part of his fortune,

about $100,000, in buying and freighting a ship in which he proposed to sail home. But now disaster overcame him. He had brought with him " a favourite horse, an animal much admired in camp and valued at 4,000 rupees," probably intending that it should accompany him to America. Displaying its paces to some of his fellow-countrymen at Calcutta, it fell and he sustained injuries which proved fatal in a few hours. He was buried in the old graveyard in North Park Street, " Major James Murray of the Maharaja Scindia's Service, a native of Newport, North America, who dignified the character, profession, and courage of a soldier by the practice of the mild and social duties of justice, humanity, and benevolence," He died on 23rd September, 1806, at the age of 35.

Another calamity supplies a postscript. " As soon as his demise was announced the American captain whose ship he had bought and freighted set sail and was never heard of afterwards, leaving his (Murray's) widow minus about 40,000 pounds sterling. Inquiries were made in England and America without success," relates Long. The allusion to a widow requires amplification. Murray had an Indian consort, though Long (who had one too), does not say so. She was Jane, *alias* Beebee Jin, and when she died in August, 1810, she left a will in which she stated, " my husband was the late Major Murray." From him she received a legacy of 25,000 rupees, then equivalent to about half that number of dollars. His will gives her name as Jane, and her status as wife; probably she was of Muslim origin and they were married by Islamic rites.

In his last will and testament, which bears the date of his fatal accident and must have been signed on his death-bed, James Murray describes himself as " residing near Calcutta, but a late captain in the Maratha service, in a weak state of body but of sound mind, memory, and understanding." (Whether he was ever a major, and if so in what army, is uncertain.) He left 10,000 rupees to a Mr. Hitchcock, doubtless the former Maratha officer of that name who had received a British pension in 1803; 5,000 rupees to Captain Adkins, one of the prisoners whose life he had saved at Indore in 1801 and latterly serving in the Grand Army alongside the Shekhawati Horse; and 3,000 rupees to Major Smith, identifiable as the Major Lewis Ferdinand Smith who, in 1804, published a short book with a long title which we may abbreviate as *A Sketch of the Rise, Progress, and Termination of the Regular Corps formed and commanded by Europeans in the Service of the Native Princes of India.* In the tribute on his comrade's tomb, with its reference to benevolence, we may recognize the hand of Major Smith, most literary of the soldiers of fortune, to his comrade of many gifts who died before his time.

"SOUTH"

AN APPRECIATION

By Lieutenant-Commander G. Grogan, R.N.

NEW books are brought to our notice by the advertisement and reviews which accompany their publication. With the passage of time, however, they are prone, with few exceptions, to fade into obscurity, unless events, or some historian, conspire to bring them into the limelight again.

This article is an attempt to revive interest in such a book and to introduce it to a younger generation, who may be unaware of its existence. Even those who can remember the events in question may care to refresh their memories, as it is a book which is well worth reading again.

South is Sir Ernest Shackleton's personal account (published by Heinemann in 1919) of his last expedition to Antarctica, which extended from the latter part of 1914 to the beginning of 1917.

Whilst the saga of Captain Scott's last journey has become a classic of English literature, that of Shackleton's last expedition has remained comparatively unknown. This is, perhaps, due to the fact that it was overshadowed by the 1914–18 War and the spate of literature arising therefrom. It is, nevertheless, a story which should take a high place in the history of exploration, for it is a vivid account of several prolonged struggles with the Antarctic elements, in which man eventually succeeded against great odds.

Finally, the book should soon regain topicality, because the forthcoming British Commonwealth Antarctic Expedition of 1957–58 plans to follow almost exactly the same route as that intended by Shackleton for his expedition.

The expedition was composed of two separate parts, the larger of which, under the command of Sir Ernest Shackleton, sailed from England in August, 1914, in S.S. *Endurance*. Although every member had volunteered his services on the outbreak of war, the Government expressed the wish that the expedition should proceed. After calling at the whaling station in South Georgia, the *Endurance* approached Antarctica via the eastern side of the Weddell Sea. The intention was to establish a base at Vahsel Bay, which lies at the southern extremity of the Weddell Sea. Three sledging parties would be landed here. The transcontinental party of six, led by Shackleton, was to sledge 1,800 miles via the South Pole to the Ross Sea on the other side of the continent. Another party of three would explore eastwards towards Enderby Land, and a third party, also of three, would explore westwards in the direction of Graham Land.

Meanwhile the smaller part of the expedition, under the command of Captain Aeneas Mackintosh, sailed from Tasmania in S.S. *Aurora* in December, 1914. Their task was to establish a base at McMurdo Sound in the Ross Sea. From this base a sledging party was to lay out supply depots on the route to be taken by the transcontinental party from the Weddell Sea. Later on they were to march south to meet the transcontinental party and accompany them back to the Ross Sea base.

By way of comparison, the object of the 1957–58 expedition is to cross Antarctica in surface vehicles. The main expedition, under Dr. Fuchs, will start from Vahsel Bay on the Weddell Sea, using tracked vehicles and dogs, and will aim to drive in a straight

line to the South Pole. The New Zealand part of the expedition, led by Sir Edmund Hillary, will start from McMurdo Sound on the Ross Sea, hoping to meet Dr. Fuchs's party somewhere near the South Pole and returning with them to McMurdo Sound. It is also the intention that bases at each end of the route across Antarctica shall be set up early in 1956, so that they may be available to scientists taking part in the International Geophysical Year studies of 1957–58.

To carry the comparison a little further, the earlier expedition also had dogs and one or two powered vehicles in the form of motor sledges. Whilst the dogs gave yeoman service before they had to be disposed of, the same cannot be said of the motor sledges which suffered from the temperamentality of the internal combustion engine of that time.

In the event, Shackleton's plans went awry. The *Endurance* was beset in the ice and could not land any of her sledging parties. After drifting as the prisoner of the pack for nine months, she was crushed, and a month later she sank. Shackleton and his 27 companions encamped on the ice floes which had overridden their ship. After two abortive attempts to sledge to land over the hummocked surface of the ice, it was clear that the party would have to remain on the floes until they drifted to open water. This drift occupied six months from the time that the *Endurance* was crushed. After a bad time when the floes were breaking up, they were able to launch the three ship's boats which they had providentially salved before the ship sank. A difficult six-day voyage through broken ice brought the exhausted and thirst-racked party to the bleak, uninhabited Elephant Island. Here they encamped on the only available site—a blizzard-swept beach.

Bearing in mind that both radio and aviation were at that time in their infancy, it was obvious that the salvation of the party would depend entirely on their own efforts. Shackleton therefore picked a crew of five men and set sail in one of the ship's boats to obtain assistance. Their objective was South Georgia which lay 800 miles to the north-east. The account of that 16-day boat voyage, undertaken in the depth of Winter across the wildest seas in the world, is an epic in itself. The mere finding of South Georgia in those conditions was no mean feat of navigation; in fact, all depended on it, for if they had overshot the island it would have been virtually impossible to beat back to it against the continuous westerly gales. On arrival off the island, the boat's crew were practically exhausted from exposure and thirst, yet they managed to accomplish the difficult and dangerous task of landing on a lee shore. Two of the crew were too weak to move; leaving a third member to look after them, Shackleton and the other two set out to find a route across the unexplored icebound mountain backbone of the island. It took them 36 hours continuous hard going (for they had no camping equipment and could not stop) before they finally reached civilization at the whaling station, where they were rightly welcomed as men returned from the dead.

As soon as the three other members of the boat's crew had been rescued by sea from the far side of South Georgia, Shackleton set about organizing the relief of the party left on Elephant Island. Notwithstanding the rigours he had undergone, he personally led each attempt at relief. The first had to turn back when 70 miles from Elephant Island, being unable to penetrate the pack ice which now surrounded it. Shackleton proceeded to the Falklands, borrowed another ship, but was again thwarted by the ice. His third attempt also failed, but he lost little time in trying again—this time successfully. It was only just in time, for the 22 men who had been

encamped beneath two upturned boats on that exposed beach for four-and-a-half months had only four days' food in hand. They owed their lives at least in part to the leadership of Wild who had taken charge when Shackleton departed.

Although Shackleton had salved as many stores as possible before the *Endurance* sank, there were inevitably shortages, which became severe as time went on. Food would have given out much earlier had the party not been able to catch seals and penguins. Even so, they were on short commons all the time, and farinaceous food was particularly scarce. Seal blubber became their indispensable fuel. The deterioration in tents and men's clothing during 10 months' camping in such surroundings was marked, to say nothing of accidental losses. To maintain morale and a moderate standard of health in those conditions required leadership of a very high order.

So ends the tale of the *Endurance* and her crew. It is more than a chronicle of gallant failure to achieve the object of the enterprise ; it is the story of an expedition whose line of retreat and only link with the outside world was cut, and whose leader successfully forged a new link under the most adverse circumstances imaginable. Shackleton's feat in bringing all 27 members of his party through such a prolonged ordeal without the loss of a single man was utterly remarkable. He himself ascribes it to the hand of the Almighty, and few would dispute it.

Meanwhile the Ross Sea party were also having their difficulties. The *Aurora* successfully penetrated into McMurdo Sound and landed 10 men, including Mackintosh. They set about establishing themselves ashore and had the benefit of two huts, several miles apart, which had been erected by earlier expeditions. Preliminary sledging trips were made on to the Great Ice Barrier to start laying the nearer depots. The *Aurora* was to remain in McMurdo Sound, and moored herself up in winter quarters, but during a blizzard she and the surrounding ice broke away and were driven northwards. Despite every effort to return she was unable to make headway against the pack, and very nearly suffered the same fate as the *Endurance*. After drifting for 10 months, during which her rudder was carried away and the ship was badly strained, she eventually reached open water and limped back to New Zealand with a jury rudder and down to her last few tons of coal.

An added misfortune was that the *Aurora* had landed only part of the outfit of stores, clothing, and sledging equipment at the time that she broke adrift. Nevertheless, Mackintosh decided that the party ashore must endeavour to lay out the depots. To the best of their knowledge, the transcontinental party would in due course set out from the Weddell Sea and would be relying on the depots previously arranged. Accordingly, after more preliminary building up of the nearer depots, Mackintosh and five companions set out to lay depots as far as Mount Hope at the foot of the Beardmore Glacier, 415 miles away. Their journey took the best part of four months. On the outward trip matters went fairly well, although one member of the party developed scurvy and had to be left encamped at 82° S., while the remainder pressed on to lay the last depot at 83° 30′ S. Having successfully accomplished this, they commenced the return trip, picking up the sick man (Spencer-Smith) on the way. After making fair progress the party was halted when some 90 miles from base by a blizzard which lasted for five days. Rations were now running short and all members of the party had been gradually weakening from scurvy. Soon after restarting, Mackintosh's legs gave out. The remaining four found that they had not the strength to pull two sick men on the sledges. It was therefore decided to leave the invalids encamped with a third man to look after them whilst

the other three pushed on to the next depot 12 miles away to get more food. Owing to further blizzards that 12 miles, on a starvation diet, took three full days, and the whole party nearly suffered the same fate as that of Captain Scott. Incidentally, they were following Scott's route and were, indeed, in the same locality as that in which Scott was overwhelmed by a series of blizzards. After a day's recuperation at the depot, the three men went back for their comrades and the whole party resumed their march with two sick men on the sledges, and a third (Hayward) rapidly weakening. After a further eight days of nightmare journey, Mackintosh gave orders that he was to be left encamped while the rest pushed on with the other invalids. Two days later, Spencer-Smith died. Another two days of hard going brought the remnants of the party into their base. After a short recuperation they went out and fetched Mackintosh, hardly expecting to find him alive, but luckily he had become no worse.

After resting from their labours, the five members of the sledging party naturally wished to join the four men who were at the other hut across the Sound. Although urged to wait until the ice was firmer, Mackintosh and Hayward insisted on making an early journey. While they were crossing a blizzard broke up the ice in the bay and carried the two men out to sea. They were never seen again.

Meanwhile the *Aurora* had been refitted in New Zealand, and Shackleton, with his indomitable energy, went south once more to bring home the Ross Sea party. After making a fruitless search for any clues as to the fate of Mackintosh and Hayward, he returned with the seven survivors to New Zealand in February, 1917.

The Ross Sea party thus accomplished their mission, although at the time they did not know that the harvest would never be reaped. Whilst at their huts they were, of course, in comparative comfort and safety, despite a distinct shortage of clothing and a somewhat lesser shortage of food and fuel. Their perseverance against great difficulties in their long sledging trip was of the highest order, and it was surprising that only one man succumbed. The loss of Mackintosh and Hayward after surviving their long ordeal was indeed a cruel turn of fate.

South is, then, an absorbing story of outstanding leadership, fortitude, and endurance, of seamanship and improvisation. It deserves to be much more widely known. The book is well illustrated with photographs which are in themselves fine evidence of the pertinacity of Hurley who took the great majority of them. It would be appropriate if a cheap edition could be published on the eve of the present Antarctic expedition, to remind the world of a valiant attempt to make the same journey 40 years ago.

PRECEDENCE OF REGIMENTS AND CORPS

By Major T. J. Edwards, M.B.E., F.R.Hist.S.

ONE of the so-called 'mysteries' of the Army is the official precedence of regiments and corps. The uninitiated are somewhat bewildered by the fact that a young corps like the Royal Signals, formed in 1920, takes precedence before the Grenadier, Coldstream, and Scots Guards, who have an unbroken existence from the XVIIth Century; or why the Royal Tank Corps, formed in 1917, was placed after all Infantry until 1939, when, on becoming a part of the Royal Armoured Corps (with the title of Royal Tank Regiment), it was placed before the Royal Artillery, which was raised in 1716. The Dorset Regiment was raised in 1702, but it takes precedence after The South Staffordshire Regiment raised three years later; and again, The Royal Scots Fusiliers were raised in 1678, yet it is placed after infantry regiments raised in 1685, seven years later. These few examples are sufficient to indicate that there is ample cause for lack of understanding in regard to this matter. However, on closer study, it will be found that definite rules have operated and that the anomalies are only apparent.

For the purpose of precedence the Army may be considered under two heads: (*a*) the main groups or arms and (*b*) the regiments and corps within each group or arm.

Main Groups

(i) Cavalry—includes the Household Cavalry and former cavalry regiments now in the Royal Armoured Corps.

(ii) Artillery, Engineers, and Signals.

(iii) Infantry.

(iv) Administrative Department and Corps.

MAIN GROUPS

Cavalry

Precedence connotes a place of honour, and questions concerning this soon arose after the Restoration in 1660. But although no fewer than six Royal Warrants on the subject were published between 1666 and 1694, none of these touched upon the relative rank of the arms of the Service. In fact, it was not until several regiments of Foot and Dragoons were ordered to encamp together in the Isle of Wight in the Summer of 1708 that a board of general officers was convened to consider this aspect, and at their meeting on 23rd June, 1708, they placed the Dragoons above the Foot. Unfortunately, their report, which is quite brief, does not give any reason for this decision. However, it seems to have been based on an earlier Royal Warrant, that of 30th October, 1684, wherein it was laid down that Dragoon regiments had two orders of precedence, thus—"That Our Own Royall Regiment of Dragoons, and all other Regiments of Dragoons to be employed in Our Service, shall have precedency both as Horse and Foot as well as in Garrison and in the Field . . . [that is to say] That in the Field the said Regiments shall take precedence as Regiments of Horse, . . . and in Garrison [these] Regiments take place amongst the Foot." Originally, Dragoons were in the nature of mounted infantry, merely using their horses for greater mobility.

These extracts from the 1684 Warrant show clearly that the Horse (now represented by the Household Cavalry) took precedence before Dragoons and Foot. All of our Dragoon Guard regiments were originally Horse: the 1st, 2nd, and 3rd Dragoon Guards were converted from Horse to Dragoons, with the new title of Dragoon Guards, in 1746, and the 4th, 5th, 6th, and 7th were similarly converted in 1788. Besides this titular distinction, another reminder of the Dragoon Guards' former superior status is that as Horse they carried square standards and on conversion to Dragoons were permitted to continue carrying them, as they do to-day, instead of adopting the swallow-tailed guidons of Dragoons.

Apparently, in the course of time, the decision of the board of general officers on 23rd June, 1708, had either been disregarded or overlooked, for in 1802, the question of the relative precedence of dismounted Dragoons and Foot Guards arose again, when they were together at Weymouth. The matter was referred to the Horse Guards who ruled, by a letter dated 2nd September, 1802, " that a Cavalry soldier, whether mounted or dismounted, takes the right on parade of the whole of the Infantry Service." This seems to have settled the matter for all time.

The question of the precedence of cavalry regiments converted to a mechanized role appears to have been raised when the 11th Hussars and 12th Lancers became armoured car regiments in 1928. This point was settled decisively in their favour, for in the second paragraph of Army Order 62 of 1928, it is stated: " On conversion as above, the regiments concerned will retain their present titles, privileges, precedence, and identity as regiments of the Cavalry of the Line." When the Royal Armoured Corps was formed under Army Order 58 of 1939, the opening paragraph made it clear that it would have precedence in the Army immediately before the Royal Regiment of Artillery, so that in practice it retained its former position as Cavalry of the Line. Under the same Army Order the Royal Tank Corps was transferred to the R.A.C., with the new title of the Royal Tank Regiment. In the *King's Regulations* of 1923 and 1928, its position was immediately after Infantry of the Line, because it had been formed out of the Heavy Branch of the old Machine Gun Corps, which, in turn, had been formed from Infantry. But on becoming a unit of the R.A.C. it moved up to join its parent corps, thus taking precedence before many regiments and corps over 200 years older than itself.

Although Cavalry as a whole had taken precedence before the Royal Artillery ever since the latter was raised in 1716, this arrangement became disturbed by the Royal Horse Artillery, raised in 1793. The first time in which the precedence tables appeared in official regulations seems to be the *General Regulations and Orders* of 1804. In this table the R.H.A. is placed immediately after the Household Cavalry and before Cavalry of the Line, with a note added stating that on parades " the Horse Artillery, whether mounted or dismounted, take the right of all other Cavalry," but, presumably, not the Household Cavalry. In *Queen's Regulations* for 1857 the R.H.A. is placed before the Household Cavalry, this being in compliance with a submission to Queen Victoria on 22nd June, 1857, wherein it was argued that as the Foot Artillery were given precedence in 1756 before all Infantry, the R.H.A. should, logically, take precedence before all Cavalry. And so the R.H.A. remained on the right of the line until 1868 when another submission was made cancelling that of 1857, and restoring to the Household Cavalry its former position before the R.H.A., but with the proviso that when the R.H.A. was on parade with its guns it would take the right and march past at the head of the Household Cavalry, which is the position to-day.

Artillery, Engineers, and Signals

The Royal Artillery was formed by the old Board of Ordnance in 1716, but its precedence was not settled until 1757. It seems that from the time it was raised the R.A. had, by custom and practice, always taken precedence before all Infantry. In a letter dated 8th December, 1757, from the Secretary at War to the Duke of Bedford, then Lord Lieutenant of Ireland, it is stated that " the Regiment of Artillery here does take the right of all other Guards on Foot, but it is apprehended that station is given to them not by virtue of any privilege, but merely by custom founded upon convenience." In 1756 it was laid down " that the Artillery take the right of all Foot on all parades, and likewise of Dragoons when dismounted," and this was confirmed by the Horse Guards in May, 1799.

The Royal Engineers were also formed by the Board of Ordnance a year later than the R.A., and by a Royal Warrant of 25th April, 1787, their precedence " on the right with the Royal Regiment of Artillery " was laid down, a position the R.E. has maintained.

The Royal Corps of Signals was formed from the R.E. and under the rule of inheritance they follow the R.E., although formed as late as 1920.

Infantry

As already shown, Dragoons were placed above the Infantry in 1708, and by inference the Horse were given precedence before Dragoons by the Royal Warrant of 1684. The Cavalry generally were placed before " the whole of the Infantry Service " by Horse Guards letter of 2nd September, 1802, and it has just been explained how the R.A., R.E., and Royal Signals obtained their precedence ahead of the Infantry.

Administrative Department and Corps

The Departmental Corps, that is corps within or administered by departments, were not mentioned in the precedence tables in the *Queen's Regulations* until the 1868 edition, where they are placed next below Colonial Corps. At that time it was usual for the other ranks to be formed into corps and for the officers that administered the corps to belong to the corresponding department. For instance, the first Army Service Corps, formed in 1870, was administered by officers of the Supply and Transport Sub-Department of the Control Department. In the course of time the departments (officers) and corps (other ranks) were fused to form the present corps, with the exception of those formed recently.

The only department that still exists is the Royal Army Chaplains' Department, formed in 1796. It is first mentioned in the precedence tables in *K.R.* 1923, where it is sandwiched (with the Royal Malta Artillery and West African Regiment) between units of the Administrative Corps. It was not until a few years before the late war that the Administrative Department and Corps appeared as a complete block, and in detail, in *The Army List*, with the R.A.C.D. at the head by virtue of its seniority.

REGIMENTS AND CORPS WITHIN THE GROUPS

As in the case of the main groups, questions of relative precedence within the arms or groups arose soon after the Standing Army was inaugurated, in fact, the opening words of the earliest Royal Warrants on the subject, i.e. those of 12th September, 1666, 1st September, 1675, 6th February, 1684, and 3rd August, 1685, indicate this, thus—" For preventing of all questions and disputes that might arise for or concerning . . . ," etc.

Household Cavalry

In the Warrant of 1666 it is stated: "As to the Horse, that the Troops of Guards take place before all others" and "that the King's Regiment of Horse take place immediately after the Guards."

In the first establishment for the Standing Army, that of 26th January, 1661, three troops of Guards were provided for, viz., the King's, the Duke of York's, and the Duke of Albemarle's. A fourth troop was raised in Scotland, where it remained until after the union of that country with England in 1707, so was not concerned with these very early questions of precedence. When it did come to England in 1709 it took its place as the fourth troop.

The Duke of Albemarle died in 1670 and his troop, the 3rd, became the Queen's, with precedence next after the King's, thus 'jumping' the Duke of York's. This change caused no little stir in Court circles, for it was well known that the Queen and the Duke of York—James, the King's brother—had a strong dislike for each other. This change, however, was to have a lasting effect on The Life Guards, for Albemarle's troop had served in the Commonwealth Army as his life guard when he was Commander-in-Chief, therefore, when the 1st and 2nd troops, with some of the Horse Grenadiers, were regimented in 1788 as the 1st and 2nd Regiments of Life Guards, the link with the Commonwealth forces was retained, and was continued when these two regiments were amalgamated in 1922 as The Life Guards.

"The King's Regiment of Horse" mentioned in the 1666 Warrant is now the Royal Horse Guards (The Blues). Unlike The Life Guards, which were more or less independent troops until regimented in 1788, The Blues was a regiment from its raising in 1661. Nevertheless, the three independent troops of Guards had been raised a few years earlier.

Cavalry of the Line

Although several cavalry regiments had been raised before 1708 (e.g. Royal Dragoons, Royal Scots Greys, King's Dragoon Guards to 6th Dragoon Guards, 3rd, and 4th Hussars, to mention only some of those that exist to-day) no Royal Warrants seem to have been published dealing with their precedence before that date. However, a general rule had been laid down in the Warrants concerning the Foot in 1675, 1684, and 1685, which was to affect the Cavalry. It was:—

> "That the several Regiments that are not of Our Guards take place according to their respective seniorities from the time they were raised so as that no Regiment is to lose its precedency by the death of their Colonel."

This rule was modified by others in 1694 by a Royal Warrant of William III which, owing to their far-reaching importance, are quoted fully here:—

1. "That an English Regiment shall take place of all other Regiments being otherwise in the same circumstances."
2. "That an Irish Regiment shall have rank from the Day it comes upon the English Establishment, and shall not lose it afterwards by their return into Ireland, or being put upon the Establishment of that Kingdom."
3. "That a Scots Regiment coming upon the English Establishment shall take rank with other Regiments from that time."
4. "That any Regiment of what Nation soever, being raised in England, shall have rank from the time of its raising."

5. "That the three English Regiments that have lately served in Holland take their rank immediately after the Queen's Regiment of Foot, in respect of the Capitulation that was made for them by the Earl of Ossory in the year 1668, with the allowance and Direction of Our Dearest Uncle King Charles the Second, which is likewise to have effect as to the rank, with the Scots Regiments among themselves."

In amplification of the above rules it should be explained that in 1694 there were separate establishments for England, Ireland, and Scotland, and it is to the application of these rules that some of the 'apparent' anomalies, mentioned in the opening paragraph of this article, can be traced. Rule 4 refers to The Queen's Regiment of Foot: this became His Majesty's Own Regiment of Foot (or The King's) in 1715, was later numbered the 4th Foot, and is now The King's Own Royal Regiment (Lancaster). The 'three regiments that have lately served in Holland' are The Royal Northumberland Fusiliers, The Royal Warwickshire Regiment, 5th and 6th Foot respectively, and Cutts' Regiment, disbanded in 1699.

This Royal Warrant was originally intended to apply to foot regiments then serving in the Low Countries "and for settling for the future the Precedency of such Regiments as may hereafter be raised or taken into Our Service," but it was soon to have a general application to all regiments.

When the board of general officers considered the relative precedence of Dragoons and Foot encamped in the Isle of Wight in 1708, they referred to King William's rules and suggested that Rule 4 should be modified thus:—"That no Regiment raised in England is to be deemed an English Regiment unless placed, at the time of raising, on the Establishment of England." In their report a few days later, they listed the regiments concerned in the order in which they considered agreed with these rules. In the case of the Dragoons they placed them:—

1st Brigadier Carpenter's	now 3rd Hussars.
2nd Earl of Essex's	now 4th Hussars.

In view of the fact that the date of raising of the 3rd Hussars is 2nd August, 1685, and that of the 4th Hussars is 17th July, 1685, or three weeks earlier, this raises a complication, for it appears that Rule 4 had not been correctly applied. The Board did not say why they placed these regiments in that order and it is one more of those problems mentioned in the opening paragraph of this article. The solution, however, seems to lie in the fact that whereas both regiments were formed by regimenting independent troops of Dragoons raised for the Sedgemoor campaign, those which formed the 3rd Hussars had been previously attached to The Royal Dragoons, then under the Colonelcy of John Churchill, later the great Duke of Marlborough, and probably it was accorded precedence over Essex's Dragoons by virtue of its service with the oldest regiment of Cavalry of the Line.

William III died in 1702 and was succeeded by Queen Anne. Ten years later Her Majesty directed a board of general officers "to settle and adjust the ranks of the several Regiments in Her Service," and on 14th July, 1712, the board called for lists showing the dates of raising and of coming on to the English establishment of all regiments. On 28th July, however, Sir William Wyndham, Bt., Secretary at War, notified Mr. Byde, Secretary to the Board, that the Queen had made a new rule, and that precedence was to be decided on the date of raising of regiments and not on the date they came upon the English establishment, thus setting aside King William's rules and reverting to the rule that applied to the Foot and stated in the Royal Warrants of 1675, 1684, and 1685, and set out in the opening paragraph of this section.

This raised a great storm of protest from a number of colonels of regiments which had lost precedence, and on 23rd September, 1712, the board sent a letter to the Secretary at War acquainting him that they " foresee great difficultys in relation to Her Majesty's Horse and Foot Guards with those of Scotland," and illustrated this by showing that if the Queen's new rule were applied to them the Scots Guards and Coldstream Guards would take precedence before the Grenadier Guards, and that The Royal Scots Greys would take precedence before the 1st The Royal Dragoons. In the light of these examples, the board said that they were " in doubt whether Her Majesty is pleased the present direction should extend to all Her Guards and other Troops " and " they desire you will move Her Majesty therein and lett them know Her further Pleasure." It took just a week to obtain the Queen's pleasure which was " that the said rule do not extend to alter the present Rank of any of Her Guards, nor any other regiment that was raised before the last warr," i.e. the War of the Spanish Succession (1701–1711). Of the regiments still existing the last to be raised before that war was the 8th Hussars, raised in 1693, of the Cavalry, and the 1st Bn. The Worcestershire Regiment (29th Foot), and 1st Bn. The Royal Sussex Regiment (35th Foot), raised in February and June respectively of 1701, of the Infantry. Several regiments were raised in 1702, but war had been declared in September, 1701.

As far as the Cavalry of the Line was concerned, Queen Anne's new rule (date of raising) affected only one regiment, The Royal Scots Greys. It had been raised in 1681, whereas The Royal Dragoons had existed as troops of Horse since 1661, and had seen considerable active service at Tangier, but was not regimented as a regiment of Dragoons until 1683 under the Colonelcy of John Churchill. It had, however, been ' raised before the last warr,' and so retained its place at the head of the Dragoons. The Earl of Stair, then Colonel of The Greys (1706–1714), successfully contested that his regiment had always taken precedence before the 3rd and 4th Hussars and in the Royal Warrant of 23rd April, 1713, it is placed next after The Royal Dragoons, a position it still retains.

But several regiments that had been raised since the commencement of the last war had suffered a loss of precedence as a result of the application of the Queen's new rule, and their colonels submitted a petition to the board of general officers in November, 1712, for submission to Her Majesty, complaining that they had " a very sensible grievance " in this respect. As soon as the Queen received the petition she sent for Mr. Byde, Secretary to the Board, and told him, apparently somewhat bluntly, that she would not suffer the petition to be read, that she resented its being made, and that she expected her orders to be obeyed. In view of the fact that Queen Anne had only two months previously changed her mind in regard to her rule and modified it in favour of her Guards and regiments raised before the last war, her present outburst seems a little odd, except that she may have been getting tired of the prospect of seeing her rule gradually becoming ineffective.

However, Anne died in August, 1714, being succeeded by George I, and soon the colonels of the regiments that had lost precedence as a result of Her late Majesty's rule, raised the matter with the board of general officers, who now were in some doubt as to which rules should apply, those of William III or those of Queen Anne. They accordingly submitted the matter to the King, and William Pulteney, Secretary at War, notified the board on 11th January, 1715, that " His Majesty is pleased to direct, disapproving of all retrospects, that the Rules settled by King William, which have governed during the two late wars, shall remain and be established as a

Regulation for the settling the Rank and seniority of the several Regiments which do now or lately serve in the Army." Accordingly, the board again examined the question and on 19th February, 1715, made their report to the King, in which the cavalry regiments were placed in the same relative order that existed until the reduction of that arm by four regiments in 1921.

The Royal Armoured Corps was formed in 1939 (A.O. 58/1939) consisting of most of the regiments of Cavalry of the Line, the remaining regiments being transferred to it in 1941 (A.O. 49/1941). In 1940 and 1941, several yeomanry regiments became units of the R.A.C. (A.O.s 199/1940 and 49/1941). This change of role of Cavalry did not affect its precedence for in the opening paragraph of Army Order 58 of 1939, it is clearly laid down that the " Royal Armoured Corps to have precedence in the Army immediately before the Royal Regiment of Artillery," which is the position it had always enjoyed. It followed, therefore, that new R.A.C. Regiments raised during the late war under A.O. 213/1940 (22nd Dragoons, 23rd Hussars, and 24th Lancers) and A.O. 7/1941 (25th Dragoons, 26th Hussars, and 27th Lancers) were subject to King William's rule in the matter of relative precedence within the R.A.C., and were ranked accordingly. All six regiments were disbanded under A.O. 48/1948.

As regards the four regiments reduced in 1921, they were the 5th Lancers, 19th and 20th Hussars, and 21st Lancers. They were disbanded under A.O. 319/1921, but reconstituted and amalgamated with other regiments under A.O. 133/1922. Two complications arose from these amalgamations, the first being connected with the 5th Lancers combining with the 16th Lancers to form the 16th/5th Lancers, now 16th/5th The Queen's Royal Lancers (A.O. 82/1954). The 5th were raised in 1689 from the defenders of Enniskillen, but were disbanded in 1799 for insubordination. However, the remaining junior regiments were not renumbered and moved up one place to fill the vacant place, as was the usual practice at that time, but the number was left vacant, so that when the order for disbandment was cancelled in February, 1858, the reconstituted regiment was restored to its original position and designated 5th (Royal Irish) Dragoons. Nevertheless, when the amalgamations took place the previous history of the 5th in 1799 seems to have been remembered and in the new title it took the junior position—16th/5th—and as a consequence lost its former precedence after the 4th Hussars, the 16th having been raised in 1759.

The second complication concerned the amalgamation of the 5th Dragoon Guards with The Inniskillings (6th Dragoons). For some reason which has not been traced, the combined regiment was assigned the title of 5th/6th Dragoons (A.O. 133/1922). Thus the 5th Dragoon Guards, which had, from the time of its raising in 1685 as a Horse regiment until 1922, enjoyed precedence above Dragoons, was now demoted to a position after the 4th Hussars, also raised in 1685 but as Dragoons. This situation remained until 1927 when the title was altered to 5th Inniskilling Dragoon Guards, with precedence next after the 4th/7th Dragoon Guards (A.O. 179/1927), which restored it to its rightful place, carrying with it The Inniskillings. The 5th Inniskilling Dragoon Guards were granted the title 'Royal' by A.O. 110/1935.

Brigade of Guards

In the earliest Royal Warrant dealing with precedence, that of 12th September, 1666, it is laid down that " The Regiment of Guards [now Grenadier Guards] take place of all other Regiments " . . . and " The General's Regiment [now Coldstream Guards] to take place next, the Admiral's [raised 1664, disbanded 1689] immediately

after, and all other Regiments and Colonels to take place according to the date of their Commissions." The Scots Guards, being in Scotland, are not mentioned in this Warrant. The Royal Warrants of 1675, 1684, and 1685, placed the Guards in the same order as in 1666.

In their list of 1712, the board of general officers placed the " 3rd Regiment of Guards " (now Scots Guards) next after the Coldstream because it was now serving in England. Following King William's rules the Irish Guards (raised 1900) and the Welsh Guards (raised 1915) were placed in their present order, the seniority of all regiments of the Brigade thus being—Grenadier, Coldstream, Scots, Irish, and Welsh Guards.

When regiments of the Brigade are grouped together on parade they do not, however, take post from right to left in order of seniority, but still observe a XVIIth Century arrangement in which the flanks were occupied by the senior regiments and the centre by the junior. Seventeenth Century military writers are not unanimous on this point, *vide* the following from Colonel Clifford Walton's *History of the British Standing Army*, p. 525 :—

> " In 1678 the Commander-in-Chief gave it as his opinion that the centre was the Post of Honour ; but in 1684, when the King held a review on Putney Heath, the Regiments of Guards, both Horse and Foot, were posted on the right of the line, and in 1686 the Regulations distinctly laid down that the juniors were always to take the centre. It should, however, be remarked that some private authorities had always held the right to be the place of precedence, and the centre to come next to it, while others held that the left came second and the centre last."

The reason for placing the senior regiments on the flanks in the 'days of long ago' was because these positions were more vulnerable than the centre, and older regiments, being more experienced, could be expected to fight better than younger regiments, who were accordingly placed in the centre, protected by the flanks. When, therefore, battalions from each of the five Regiments of the Brigade parade together, they observe the following order :—

2	4	↑ 5	3	1
Coldstream Guards.	Irish Guards.	Welsh Guards.	Scots Guards.	Grenadier Guards.

When all five regiments are not represented on a parade, the same system is observed, viz., senior regiment on the right flank, next senior on the left flank, and so on.

Infantry of the Line

Many of the problems and difficulties already referred to in connection with Cavalry of the Line applied also to Infantry of the Line, until William III's rules were stabilized by George I in 1715.

After dealing with the Guards, the 1666 Royal Warrant stated that " all other Regiments and Colonels to take place according to their Commissions," i.e. date of raising. To safeguard regiments against loss of precedence due to the death of their Colonels, the 1675, 1684, and 1685 Warrants laid down the rule set out in the opening paragraph to ' Cavalry of the Line.'

It was not until 1684 that the Warrants mention infantry regiments by name, and in the Warrant for that year we find—" Our Scotch Regiment [now Royal Scots] and Tangier Regiment [now The Queen's]; Our Most Dear and Most Entirely Beloved Brother James Duke of York's Regiment [disbanded 1689] are to have precedency as they are ranked here. That all other Regiments of Foot take place according to their respective Seniorities from the time they were raised," followed by the safeguard mentioned above.

The first considerable and permanent augmentation to the Standing Army was made by James II to meet the rebellion led by the Duke of Monmouth in 1685, which collapsed after the defeat of the rebels at the Battle of Sedgemoor. To settle the precedence of these regiments a Royal Warrant of 3rd August, 1685, was issued, in which regiments were placed or ranked in the following order :—

Title in 1685.	*Present Title.*
The Royal Regiment	The Royal Scots (The Royal Regiment)
The Queen Dowager's Regiment ...	The Queen's Royal Regiment.
Prince George of Denmark's Regiment	Disbanded 1689.
The Holland Regiment	The Buffs.
The Queen's Regiment	The King's Own Royal Regiment.
The Royal Regiment of Fusiliers ...	The Royal Fusiliers.
Princess Ann of Denmark's Regiment...	The King's Regiment.
Henry Cornwall's Regiment	The Royal Norfolk Regiment.
Earl of Bath's Regiment	The Royal Lincolnshire Regiment.
Duke of Beaufort's Regiment	The Devonshire Regiment.
Duke of Norfolk's Regiment	The Suffolk Regiment.
Earl of Huntingdon's Regiment ...	The Somerset Light Infantry.
Sir Edward Hales's Regiment	The West Yorkshire Regiment.
Sir William Clifton's Regiment... ...	The East Yorkshire Regiment.

It will be noticed that the list does not include The Royal Northumberland Fusiliers or The Royal Warwickshire Regiment, owing to these regiments being in Holland at that time. But under paragraph 5 of the Warrant of 1694, set out above under ' Cavalry of the Line,' they were assigned precedence immediately after The King's Royal Regiment.

In 1689, William III had his hands fairly full in regard to military business: the exiled James II was besieging Londonderry and Enniskillen, and France was contemplating an attack on the Netherlands. To meet these circumstances, William augmented the Army by raising several new regiments, and their precedence was laid down in a Royal Warrant of 18th July, 1689. Only three of these regiments still survive, viz., The Cheshire Regiment, The Royal Welch Fusiliers, and The South Wales Borderers, who are ranked as the 1st, 5th, and 11th in that Warrant, but who were later numbered the 22nd Foot, 23rd Foot, and 24th Foot.

The next Royal Warrant was that of 10th June, 1694, by William III, setting out the rules for precedence. As already shown under ' Cavalry of the Line,' they were cancelled by Queen Anne but restored by George I and have operated ever since.

The linking of cavalry regiments in 1922 had been preceded by a similar process in regard to infantry regiments in 1881, known as the ' Cardwell System,' by which single-battalion regiments were amalgamated in pairs to form new regiments. These regiments had, since the middle of the XVIIIth Century, been known by their numbers which indicated their precedence, but under the ' Cardwell System.' numbers

were abolished for all infantry regiments and territorial titles substituted, except in the case of regiments that had special titles, such as The King's Royal Rifle Corps. Territorial titles, mainly the names of counties, had been officially added to regimental numbers of most infantry regiments in 1782, and it was these titles that were adopted by the newly amalgamated regiments, usually that of the senior 'partner'; e.g. the 29th (Worcestershire) Regiment was linked with the 36th (Herefordshire) Regiment to become the present Worcestershire Regiment. Although the junior 'partner' lost its former county title, it gained in precedence by taking on that of its senior.

An exception to the application of King William's rules is The Rifle Brigade. It was formed in 1800 and numbered the 95th in 1802, but in 1816 it was taken out of the numbered regiments of the Line and styled The Rifle Brigade (*London Gazette* 2nd March, 1816). Ever since then it has taken rank after all infantry regiments. The Brigade of Gurkhas, which is composed of four rifle regiments, has been placed before The Rifle Brigade, which thereby retains its distinctive position (A.O. 67/1950).

The position of the Royal Marines when serving under the Army Act, immediately after The Royal Berkshire Regiment, is due to the fact that it was raised in 1755, i.e. after The Royal Berkshire Regiment, but before The Queen's Own Royal West Kent Regiment. When serving under the Naval Discipline Act, the Royal Marines follow units of the Royal Navy.

Administrative Department and Corps

The first difficulty encountered when endeavouring to state how the units of this section of the Army obtained their present relative precedence is connected with their origin. Unlike cavalry and infantry regiments, which were complete entities in the corps sense from the time they were raised, Departmental Corps (with the exception of those formed recently) consisted originally of officers belonging to departments and other ranks formed into corps, the two elements being later on combined to form the corps as we know them to-day.

To trace the history of each corps would occupy too much space here, but there is sufficient evidence, from a study of these histories, to infer that the present order is based on the date of raising or forming, thus continuing King William III's rules.

The position of the Royal Army Chaplains' Department at the head of this section is due to the fact that it has had an unbroken history from its establishment in 1796. It has never been formed into a corps, because it has never had other ranks.

1915—THE END OF AN EPOCH

By J. A. Terraine

IF a year can be called guilty, like a man, 1915 was that year. It was the year when, from the point of view of European civilization, everything went wrong. It has been going wrong ever since, as we well know, often at a gallop, sometimes a little more slowly, when the rearguard action has been more stubborn. But a rearguard action it is—not much doubt of it—a cutting of losses in all parts of the globe, an acceptance of schism and strain in our own Continent, and, most significant of all, an awareness that the citadels of European civilization are no longer in Europe—she is reduced to the status of an outwork. A sad story—for Europeans—and, of course, it would be ridiculous to pin the blame on any one factor, or date all of it to any one year. But 1915 does seem to have been the turning point, the deciding year, when the hard new mould of life was formed.

In a century of un-peace, 1915 was the year when war declared its true nature, its dominance over the human beings who wage it. From the British point of view, at any rate, it takes place in an unhappy, but all too significant trio—1855, when we were introduced to modern war; 1915, when we learned the sting of its mastery; and 1945, when it came to an abrupt end in two atomic flashes. It is interesting, really, and how one wishes that it was also reassuring, to reflect that what we have hitherto called ' modern war ' is a closed book, a completed opus, now. But, under the shadow of the mushroom-cloud, one is almost tempted to long for the devil one knows. If anything can correct such longings, it is the exercise of casting one's mind back to 1915.

In the first place, on 1st January, 1915, the war that was to have been over by Christmas was still on, which was bad enough; in the second place, by the Christmas of that year it had swelled, not diminished; its power of destruction had become unimaginably more severe, its problems more intransigeant than ever. It was in 1915 that the fearsome phrase ' stale-mate ' began to make itself felt. Victory stood equally far from the grasp of both European factions; to bring it nearer they had to redouble the fury of self-destruction.

For the Central Powers there was no comfort to be gleaned in 1915 which could ever compensate for the collapse of the Schlieffen Plan. After the Marne everything was a patchwork, a botching-up of makeshift strategy, until 1918 offered once again the hope of decisive victory on one front. In 1915 there was no such hope: the Russians were driven out of Poland and Galicia with terrible losses—the legendary, astronomical losses of all warfare in the East—the collapse of Austria was delayed, a mortal blow was delivered at the body politic of the Tsarist Empire, but an actual decision in the field had never even been sought. Wars are not won by diversions, even as large and brilliant as Gorlice and Vilna. And this reflection is equally the epitaph of Germany's other gains, the conquest of Serbia, and the defensive victories of her old allies, the Austrians, over their new enemies, the Italians, as well as of her new allies, the Turks, over old enemies at Ctesiphon and the Dardanelles. It was not in the limitless wastes of Russia, nor on the periphery of her swollen sphere of influence, that Germany had to seek for true victory—it was against her chief enemies, and where her main strength lay.

On the western front, and against England, because of all these peripheral enterprises, Germany was forced to act defensively, with two exceptions. But

these exceptions each comprised the use of a new and possibly decisive weapon. The poison-gas attack at Ypres on 22nd April (not quite the surprise that has sometimes been claimed for it) was the first clumsy step into the age of horror-weapons. The gas-cloud, released from containers and borne on a light favourable breeze towards enemy trenches, was a crude and unsatisfactory, though horrible, weapon; it was nothing like as effective as the deluge-bombardment of gas-shells which became a regular feature of offensive operations later in the war. Even in conjunction with the demoralizing effect of a first appearance, it failed to carry the Germans much more than three miles forward at any point. The Ypres salient contracted, became a more dismal and doomed slaughterhouse than before, but stood fast. The gas-attack failed, but the true significance of it lies elsewhere: "In the face of gas, without protection, individuality was annihilated; the soldier in the trench became a mere passive recipient of torture and death. A final stage seemed to be reached in the whole tendency of modern scientific warfare to depress and make of no effect individual bravery, enterprise, and skill." Not a final stage, indeed, but an important one.

The second weapon, tried out without success in 1915 by Germany, was the submarine as a commerce destroyer. The attempt was premature, nothing like enough U-boats were available to be effective. The result was only to warn the Entente admiralties of what might befall, so that when the main attack came in 1917, there was just that margin of preparation sufficient to nullify it. It was "a damned close-run thing," but it was enough; without the danger-signal of 1915, it might not have been there. And worse still, from the German point of view, among the ineffective sinkings of 1915 was the *Lusitania*, with all that this was to mean to American public opinion. The failure of both of Germany's new weapons was, in its way, as bad a defeat as the Marne. Too soon, and not enough—the verdict could be passed with equal exactitude upon Hitler's V-weapons 29 years later, only in 1915 Germany's plight was much less desperate, and the prospects for the Entente far less encouraging.

For us it was a year of almost unmitigated defeat—disaster in Russia, setback in Mesopotamia, defeat at the Dardanelles, frustration on the Isonzo, and absolute stalemate in France. It is hard, in the light of after-knowledge, to recapture the optimism and certainty of those days on the western front. The Christmas that had just ended had seen one of the last gestures of the old world, the famous fraternization, the meeting of British and German soldiers in the middle of no man's land to exchange gifts and greetings and to sing songs together: it seemed natural, at Christmas, in 1914; it didn't seem natural in 1915, nor ever again. The anguish of disappointment, the bitterness of loss, went too deep. The war, this new modern war, the monstrous offspring of modern civilization, had taken charge. Fraternization went out, along with pomp and panoply, the flags, the uniforms, the horsemen, the music—all drowned in shell-churned mud. But in January, 1915, there was practically no reputable military leader in the field who did not regard the drawn battles of 1914 as artificial and impermanent results. The war, after all, had so far been a war of movement, in spite of its novelties and unprecedented scale; the slowing-up and fixing processes of the later stages—the Aisne and 1st Ypres—could be put down to Winter and battle weariness. With the Spring would come the Allied counter-offensive, and the war would begin to roll back again towards the German frontier. That was the theory, and it was plausible enough—there was nothing in human history to match what was to come, so how could one be forewarned? Yet what

did come was the first batch of those offensive failures which, during the next three years, were to bring the whole Entente leadership into disrepute and blight the hopes of Europe for a generation: three French failures—1st Champagne; Artois; 2nd Champagne—and one British—Loos. Casualties were high, expenditure of matériel was colossal, the gains were insignificant. By the end of the year there was little left of the optimism of the early days and only stubbornness, will-power, and ever-growing armies grinding against each other—the *guerre d'usure* that sucked away the youth and life of Europe. Everything had gone wrong: why?

If we fix our eyes on our own Country's effort there is an answer, because 1915 was the year when the keystone was knocked out of the British Empire in a very particular way. There was, after all, something special about Britain's entry into that war, something that made it different from the clashes of the great continental Powers. Britain was first and foremost the greatest sea-power in the world; the Royal Navy was our weapon of instant readiness and greatest menace. The Grand Fleet, built around the core of its mighty battle squadrons, was the end product of 300 years of striving for naval supremacy. Indeed, the whole political structure of the war, the Entente and the Russian connection, arose out of Germany's ever-increasing threat to British sea-power; it was the Kaiser's fleet-building that made Germany our particular rival, far more than any continental aggression. And now, as 1915 unfolded, it found the Grand Fleet supreme indeed, but also supremely idle, rocking at anchor in its bleak northern harbours, or trailing its skirt in vain through the North Sea mists. For the Germans, after all their challenge, would not come out and fight, and could not be got at in their heavily fortified bases, protected by minefields and submarines. Their shipping had been swept from the oceans; our blockade was remorseless; their surface raiders were being hunted down; what more could be done? What, indeed? There could be no repetition of Beatty's dash at Heligoland; even in its own harbours the Grand Fleet was constantly subjected to U-boat panics—to expose itself freely to the under-water weapons was to play the enemy's game. How, then, could the Navy's power be brought to bear directly upon the war? That was the question for 1915, and the failure to answer it was the true origin of all the deadly frustration that followed.

When the line of battle stretched from Switzerland to the sea, the Navy became the only means of turning a flank and bringing back the possibility of manœuvre. North or south, the Navy could, if it wished, go either way round the fortress of the Central Powers. Admiral Fisher favoured the north, the Baltic approach; Mr. Churchill favoured the south, the Mediterranean, and won his First Sea Lord over, at least for a time. The result was the Dardanelles campaign, a tragic failure, tragic intrinsically because of the wasted courage and the nearness to success, but tragic also on a much larger scale because it meant a failure of sea-power itself, a failure to solve the new problem posed to it. Had it been the Baltic, and the same story, it would have been the same sort of tragedy. The point was that, having failed, such strategy was never tried again: thenceforward Britain set herself to become a land power, and the western front consumed her youth and treasure.

This, of course, was an immensely significant change. From the emergence of England as a nation-state until 1915, her whole development and expansion were based upon the Royal Navy. It was the Navy that saved her from the constant fate of every other European country—invasion; it was the Navy that enabled her to acquire overseas possessions; it was the Navy that enabled her to capture other people's overseas possessions; and it was the Navy that enabled her to subsist upon

a tiny Standing Army which could be employed whenever and wherever she wished, with huge effect. In the last resort the deciding factor in every political and strategic situation in which we were involved was the battle fleet; its ability to destroy the battle fleet of any other power dictated history. Because of her battle fleet, England was able to wage and win wars, as it were, ' on the periphery '. The pattern of British strategy was a restless seeking for weak points on the enemy's circumference where he could be gnawed and nibbled into surrender. The classic example was the Peninsular Campaign—the ' running sore ' which drained away Napoleon's strength: but the Peninsula was only one venture among many—Sweden, Sicily, Walcheren—the bull's eye after a series of misses.

After 1915, this strategy, based on a massive Navy and a small professional Army, was never seen again. For the remainder of the 1914–18 War, Britain's main military effort was lodged in the Army fighting on the continent of Europe, and depending on the Navy for maintenance and supply. But it is an indication of the frustrating *impasse* that had been reached, that such a formation should come into existence as the 63rd (Royal Naval) Division, in which men raised and trained for naval and amphibious warfare were used up as foot-sloggers in the trenches—just one division in an Army that had grown to over 70 divisions. And of course, between 1915 and 1918, we saw the budding of air power. From 1939 to 1945, the main effort was again expressed through the Army, this time very strongly supported by air power, and with the Navy again in a subsidiary role. For the future, air power seems certain to be the main factor, with both the Army and Navy in subsidiary roles. None of this precludes epics of gallantry and skill and usefulness on the Navy's part; the campaigns against the submarines in both world wars, the holding of the Mediterranean during the 1939–45 War, and the Navy's role in launching the Army into its great ventures in North Africa and North Western Europe are sufficient proof of this. But the supremacy of the battle fleet was ended, the foundations of 300 years of strategic development were knocked away; by 1915, an irrevocable change had taken place.

The Navy never recovered from this change, and we may date from it the decline of the Empire which the Navy had created. Jutland, in the following year, underlined the point—the Navy could lose the war, but could not win it. Victory at Gallipoli would have transformed the war; victory at Jutland had no effect at all. Even the destruction of the German Fleet would have been of little avail, as Jellicoe well knew when he refused to risk the destruction of his own. And the post-Jutland epoch has been the period of continuous imperial and naval contraction. Overextended and severely pressed in the first stages of the 1939–45 War, a junior partner in its later stages and thereafter, the Royal Navy has never since 1915 been more than one factor in the strategic-political game, never *the* factor, the great sanction of all our deeds and fame, as it was before. It was the end of a naval empire. And for us that is the true indictment of the year; 1915, which saw the end of our reliance solely on a professional army, the failure of the Navy to solve its new problems, and the fall of the Liberal Government, marked the close of our Golden Age.

NILE GUNBOATS, 1884-85

By Commander W. B. Rowbotham, R.N. (Retd.)

INCLUDED among the various types of craft employed on the Nile in the campaign of 1884–85, when General Lord Wolseley unsuccessfully attempted to relieve Major-General Gordon at Khartoum, were several steamers which, strictly speaking, were not gunboats, as the description is normally understood, but were merely local river craft which were seldom armed with anything more than a single machine gun.

It had been stipulated when the Nile Expeditionary Force was being organized that, although a strong Naval Brigade was desirable, it must be under the orders of the General Officer Commanding, otherwise it was not wanted. This proviso was not contested, and accordingly a small Naval Brigade under Captain Lord Charles Beresford, who had been appointed Naval A.D.C. to the General Officer Commanding in Egypt, was attached to the Force. It comprised about 10 officers and 100 men, with two Gardner guns[1]—the Army had no machine guns at that time. The Naval Brigade took part in some severe land fighting, but the story of that part of its activities is outside the scope of this narrative.[2]

Before describing how the steamers and other craft on the Nile were employed and the difficulties they encountered, it is necessary to bear in mind the distances between places and the principal characteristics of this waterway, where the forces of nature to be contended with were greater than those of the enemy.

Khartoum—the ultimate objective of the expedition—lies at the junction of the Blue Nile with the White Nile, and from there to Cairo the distance by water is about 1,650 miles. Between these two places the average fall is about nine inches to the mile, but in some stretches of the river it is 14 inches to the mile. The breadth and depth of the river are constantly altering and pilotage is complicated ; also, in 1884, the local pilots employed in the various sections of the river were seldom very reliable and usually lost their heads in an emergency.

The principal obstructions to end-to-end passage are the numerous rapids, or cataracts, as they are termed. There are six major cataracts, called First to Sixth respectively, each of which is several miles in length ; they occur about 200–250 miles apart. In addition, there are many other shorter cataracts which are known by a place-name. Isolated rocks, large boulders, islands, and sandbanks abound. These cataracts could only be passed by the paddle steamers of 1884 during the months of July to November, and above the Third Cataract (Hannek) not always even at high Nile. Steamers for the upper reaches had, therefore, to be built in sections and assembled above the cataracts where they were to be used. Once there, they remained in that part of the river. Smaller craft were able to negotiate the cataracts at a lower state of the Nile, but even the smallest were held up at low Nile. At bad stretches in the cataracts it was necessary to resort to portage.

In the space of a short article it is impossible to cover every aspect of Nile navigation, the details of which are infinitely variable. In May, 1884, Commander

[1] The Gardner gun had either two or four barrels and fired the 0.45 inch cartridge.

[2] An account of the services of the Naval Brigade will be found in *The Royal Navy. A History*, by Sir William Laird Clowes ; and in *Britain's Sea Soldiers*, by Col. C. Field, R.M.L.I. For full details of this campaign the reader is referred to *The History of the Sudan Campaign*, by Col. H. E. Colville (2 vols.), and also to the MSS. reports preserved in the Admiralty Library and at the Public Record Office.

SKETCH MAP
OF
RIVER NILE
Alexandria
Cairo
Assiut
Kanah
Esneh
Assuan
Philoe
1ST CATARACT
LIBYAN
DESERT
RED
SEA
Korosko
Angash
Gemai
Wady Halfa (2ND CATARACT)
Semneh
Sarras (RAILHEAD)
Akasha
Ambigole (CATARACT)
Tanjour (CATARACT)
3RD CATARACT
NUBIA
Hannek
Abu Farmeh
Abu Hamed
New Dongola
Salamat
Kirbekan
10·2·85
Suakin
Tofrek
22·3·85
Tamai
13·3·84
Old Dongola
Meroweh
4TH CATARACT
Korti
5TH CATARACT
El Teb
29·2·84
Debbeh
Ambukol
Berber
Jakdul
17·1·85
Abu Klea
Gubat
Shendi
Merneh I.
Wad Habeshi
Omdurman
6TH CATARACT
Halfiyeh
Khartoum
R. Atbara
Hadendowa
Arabs
Tuti I.
White Nile
Blue Nile
Fashoda
100 50 0 100 200
ENGLISH STATUTE MILES

T. F. Hammill had been ordered to survey and report on the Nile as far up as Dongola. His report, sent in at the end of July, was based largely upon information received; it is most comprehensive, but at that date very little was known about the river above Dongola.[3] The report of Lieutenant R. Poore, who took the *Nassif-Kheir* up from Semneh to Dongola in 12 days during the first half of October, gives a very good idea of the difficulties to be surmounted by a low-powered paddle steamer in that section of the river.[4]

The insurrection of Mahomed Ahmed, who proclaimed himself El Mahdi el Muntazer in 1881, before we came to Egypt at all, had swept through the Sudan, when all who stood in his way were ruthlessly massacred. Three years later there was grave danger of Egypt being overrun. The Egyptian armed forces were incapable of withstanding the encroachments of the Mahdi, and the several detachments and larger forces that had been sent to arrest him all met with disaster. In 1884, the Egyptian Government, under the direction of the British Government, decided to evacuate the Sudan; and Major-General C. G. Gordon, who had previously been Governor-General of the whole of the Sudan, when he served under the Egyptian Government, again came out to bring away the Egyptian garrison from Khartoum. Consequent on the fall of Berber on 26th May, Khartoum was cut off; and after much procrastination on the part of H.M. Government (Gladstone's second Administration), it was decided on 8th August to send a British force to relieve Gordon. This expeditionary force was under the command of General Lord Wolseley, who arrived out at Cairo on 9th September.

There were two possible approach routes to Khartoum. One was entirely by following the course of the Nile; the other was *via* Suakin to Berber, a distance of 245 miles, and thence by river. The latter route was favoured by some senior officers of both Services on the spot; but Lord Wolseley, who had the experience of the Red River Expedition (Canada) in 1870 behind him, was convinced that the Nile route was the only one practicable, and his view prevailed. The chief objection to the Suakin-Berber route was the distance between the wells, none of which could supply a large force at one time; and if the relieving force was advanced by small detachments, the enemy would have had little difficulty in overwhelming each one in turn. Some severe fighting with the Hadendowa tribes (Kipling's *Fuzzy-Wuzzy*) under Osman Digna took place in the early months of 1884 in the vicinity of Suakin, but in this phase of the campaign in the Sudan the Nile gunboats had no part.

Water transport on the Nile at the time we are considering was a slow and laborious business, which the low-powered steamers of that day could do little to expedite. From Cairo to Wady Halfa, immediately below the Second Cataract, the passage of vessels presented no great difficulty during the months when there was sufficient depth of water in the river. Heavy and bulky stores could also be brought up by rail as far as Sarras, just above the Second Cataract, but beyond that point everything had to go by water. Camel transport, though employed, was not really an economical proposition. Let us see what there was available and where it was used.

Plying below the First Cataract were some 36 Egyptian steamers, several of which belonged to Messrs. Thomas Cook & Sons. For the most part they were small passenger paddle vessels with engines of 40 h.p., which were not unlike the London 'penny' steamers of that time; their laden draught was four feet, five inches.

[3] Colville, Vol. I: Appendix O.

[4] Ibid: Appendix 27.

They were never intended to be used for warlike purposes and were entirely unsuitable for such work. Three, however, were requisitioned in May for river patrol work and were manned as follows :—

Gizeh. Lieutenant W. C. Reid and seven men from the *Monarch*.
Mahmudieh. Lieutenant J. G. Ede and seven men from the *Invincible*.
Nassif-Kheir. Lieutenant R. Poore and 19 men from the *Invincible*.

Each steamer was armed with one Gardner gun. From May to July these three steamers were patrolling below the Second Cataract.

The *Nassif-Kheir* and *Gizeh* were then passed, one at a time, up the Second Cataract, after overcoming innumerable difficulties. The passage of these two steamers formed the subject of a very comprehensive report by Commander Hammil, who was in general charge of the operations. As he says in his covering letter :—

> " I thought such an account might prove interesting ; and, to make it useful in case of future operations of a similar kind, I have entered into detail as much as possible."

When forwarding this report the Commander-in-Chief, Admiral the Right Hon. Lord John Hay, said :—

> " The account of these operations is most interesting from a professional point of view and is well worthy of attentive consideration.
>
> " I would venture to suggest that possibly their Lordships might be disposed to cause the report to be printed and a few copies to be distributed for the use of the fleet generally ; as although events may not again soon rise when such work would have to be undertaken by the Navy ; yet, it seems desirable that the experience that has been gained should not be permitted to pass entirely out of our minds."

Their Lordships accordingly had 60 copies printed and the several diagrams lithographed, over 40 copies being immediately circulated.[5]

The year 1884 was a ' bad Nile,' there being three feet six inches less water at Wady Halfa than was usual at the end of August, when the river was at its highest. The *Nassif-Kheir* was sent up first : she had the stronger hull, but her engines were in poor condition. The ascent was begun on 3rd September from Angash, and by the 19th she was clear of the Second Cataract ; after 10 days at Semneh to rest and refit, she proceeded up the river and reached her station (Hannek-Korti) after a passage of 12 days.

The *Gizeh* was the larger of the two vessels and had better engines, but her hull was very rotten and could not stand the constant contact with rocks. She started on 21st September, and although delayed on more than one occasion by the breaking of her rudder (which had to be sent back to Angash, just below Wady Halfa, to be repaired), the passage through the cataract was completed in 10 days. Leaving Semneh on 20th October, she successfully negotiated the Ambigole Cataract and the intervening rapids, but was finally wrecked about a week later in the Tanjour Cataract. There she remained.

Besides these two armed steamers, several steamboats belonging to ships of the Mediterranean Fleet and from Dockyard Reserve were employed up to above the Third Cataract. Their crews were additional to the Naval Brigade, and there were

[5] The printed report, with the original MS., is to be found at the P.R.O. in Adm. 1/6750, fo. N.579/1885.

also small naval repair and maintenance parties stationed at various points on the river up as far as Dongola.

In the upper reaches, between the Fifth Cataract and Khartoum, the Egyptian Government had 12 steamers which were under Gordon's control. These were similar to the steamers in the lower reaches.

Here it will be convenient to leave the steamers for the moment in order to describe briefly the other types of water transport employed for the conveyance of troops and stores. These could be brought from Cairo up as far as Sarras by either a somewhat unreliable railway or by water; but, as already mentioned, above that point everything had to go by water.

The two principal types of native craft used were nuggers and what were known as 'broad arrow boats.' The nugger was common to all parts of the Nile. It was a barge of very stout construction, normally capable of withstanding contact with the innumerable submerged rocks in the river; with a fair wind it could be sailed, but more often it was towed by a steamer. Its carrying capacity was calculated at eight tons. Sixty nuggers were assembled at Sarras by 6th September, having been brought down from Dongola. Next day the 1st Battalion, The Royal Sussex Regiment was embarked in them and proceeded up river, but it was not until the 29th that the whole regiment arrived at Dongola. Some detachments took less time over the journey, a matter of 17 days or so, and one nugger did the passage from Sarras to Dongola (about 250 miles) in 10 days. Other nuggers, laden with stores, continued to ascend the river until about the first week in November, after which the falling state of the river rendered further progress by this method impracticable.

The broad arrow boats belonged to the Nubian Nile. They were of two sizes, large (15 tons) and small (two tons), and were brought up from below the Second Cataract. Their crews, however, refused to go south of Wady Halfa, and the inhabitants of the Batan el Hajar were unaccustomed to the management of their lateen sails. They were not so strongly built as the nuggers, and although they did good work in the early days of the campaign, their use was largely restricted to particular reaches of the river, as many of them were wrecked in the cataracts.

It was realized at once that the number of suitable native craft available would fall far short of what was necessary, and that for the general transportation of everything above the Second Cataract, something smaller and more easily handled was required, which did not have to be towed by steamers. The type of craft used was a 32-foot whaler, similar to and slightly larger than the ordinary naval service whaler, and the specification included such modifications as were desirable for Nile work.

The large number (800) required immediately necessitated the contracts for building being placed with several firms. Although the specification no doubt included dimensioned drawings, in practice it was found that boats' fittings were not always interchangeable between boats built by different contractors. All packing cases containing boats' fittings were clearly marked for their respective numbered boats, but the cases did not always arrive at the fitting-out station at Gemai (at the head of the Second Cataract) at the same time as the boats for which they were intended. This sometimes caused slight delay when assembling a convoy of boats at Gemai.

Building in England began on 12th August, and the first batch of whalers was delivered at Wady Halfa on 14th October. The last boat left England on 3rd October,

and by 10th December the last one was ready to leave Gemai. Thus 800 boats were turned out, ready to start up river, at the rate of 20 a day. About 600 went up as far as Korti, the other 200 being employed on convoy work between Sarras and Dongola. On the upward journey each whaler carried 10 men, but when coming down the river this number was usually doubled.

The work of passing the whalers up the Second Cataract, which was under the superintendence of Lord Charles Beresford, began on 26th October, during which one portage, one mile in length, was found to be necessary ; but by the end of November the river had fallen so low that they had to be transported by rail to Sarras. The troops began to move up the river from Sarras in these boats at the beginning of November, and the last of them passed Hannek about the middle of January, 1885. Every method of progression was employed—sailing, pulling, tracking, and poling. In the bad places it was necessary to unload the boats and carry everything overland, the boats then being hauled up empty. All this was done by the troops themselves, who soon became proficient in boat management.

Reference to the whalers would be incomplete without a few words about the 380 Canadian voyageurs who were engaged for the expedition. To begin with they manned the whalers to bring them up through the Second Cataract to the fitting-out station at Gemai. After the troops had embarked, one voyageur went in charge of each boat until the soldiers were competent to manage for themselves, when the number voyageurs was reduced to one with every five boats. In the end, it was found preferable to keep parties of voyageurs each in their own section of the river, establishing them in fixed camps at those points where bad water existed ; they thus became more conversant with the difficult places in the river where conditions varied from day to day as the water fell. Here they remained, taking the boats through as they came up, and it was then possible to put one or more voyageurs in each boat over the bad stretches. The increased knowledge of the river so acquired became of even greater value when the time came later to descend the river. This arrangement, however, was not possible with Major-General Earle's River Column, which proceeded above Korti to Salamat before it was recalled, and the voyageurs accompanying it remained with their boats throughout. Lieutenant W. T. Bourke and 11 ratings also accompanied Earle's River Column. No machine gun was taken, and their duties were principally connected with the management and maintenance of the whalers.

During the latter half of 1884 the armed steamers on the lower reaches did much good work in furthering the advance of the Army up the Nile, but they had had no encounters with the Mahdists, who were above the Fourth Cataract. At the end of December, what news there was from Gordon was none too good, and it was obvious that progress entirely by river would be too slow if Khartoum was to be relieved in time. It was also known that the enemy was assembling strong forces at Shendi and Metemmeh. Lord Wolseley had arrived at Dongola on 3rd November, and on 15th December his headquarters were established at Korti. He then decided to split his force. One part—the River Column—would continue by water ; the other part—the Desert Column—would advance from Korti across the Bayuda Desert, with Metemmeh as the first objective. With the fortunes of these two columns and their hard-fought actions, however, we are not now concerned.

The only steamers on the Nile which came into serious conflict with the Mahdists were those stationed above the Fifth Cataract. Their most noteworthy activity was connected with Colonel Sir Charles Wilson's passage to Khartoum by water and his subsequent rescue by Lord Charles Beresford.

The Desert Column had reached Gubat on 20th January, and next day four of Gordon's steamers arrived there from Khartoum.[6] These vessels were similar to the other Nile steamers, but had been provided with bullet-proof iron plating over the more vital parts; this, however, was not proof against artillery fire. Each vessel was armed with two 9-pdr. brass howitzers.

A reconnaissance of Shendi by three of the steamers was made on the 22nd, during which 60 shells were fired into the place; but machinery defects prevented a start from being made for Khartoum until the morning of the 24th, when Sir Charles Wilson proceeded up the river in the *Bordein*, accompanied by the *Telahawiyeh* which was towing a nugger laden with dhura for the beleagured town. Each steamer had on board 10 other ranks of the Royal Sussex Regiment under Captains R. F. T. Gascoigne (Yorkshire Hussars) and L. J. Trafford (R. Sussex Regt.) respectively, and one or two naval ratings; there were also, in all, 240 Sudanese troops. The steamers burned wood fuel, which went very quickly and necessitated frequent stops to replenish. Fuel dumps in this part of the river were non-existent, and the wood was obtained by pulling down houses in the native villages. This caused much loss of time.

It may be asked how a yeomanry officer came to be serving abroad on active service in 1885. Captain Gascoigne began his military career in the Royal Horse Guards. He retired with a gratuity on 21st April, 1883, and on 9th August, 1884, he obtained a commission in the Yorkshire Hussars. His appearance in the Nile Expedition as a yeomanry officer was probably the result of a personal 'wangle' on his part. Other officers, it may be recalled, both before and after that date, have also got themselves attached, sometimes as volunteers, to overseas expeditions or campaigns.

In January the Nile falls rapidly, and it had been observed at Gubat to decrease in height three feet in a single night. It is scarcely surprising, therefore, that the *Bordein* grounded twice in the Sixth Cataract, which delayed the advance for 24 hours. The passage up to Khartoum was not contested until just after coming in sight of the place at about noon on the 28th, but although a heavy fire from guns and rifles was opened on the steamers when passing Halfiyeh, and again when rounding Tuti Island, they escaped damage. In the afternoon of the 27th, a man on the river bank had called out that Khartoum had fallen and that Gordon was killed, but this information was not credited by those on board.

Sir Charles Wilson went on until he had a clear view of Khartoum, being fired on from both banks and from the place itself. No Egyptian flag was then flying in Khartoum, and it was only too evident that the town had fallen. With the few troops available a landing would have been suicidal, so the steamers retired. They had arrived two days too late; though even if they had got there before Khartoum fell, it is doubtful if it would have made much difference.

As soon as the steamers put their helms over, the enemy's fire was redoubled; both vessels were hit by shells and bullets, though no serious damage was incurred. About this time the *Telahawiyeh* ran aground, but she soon got off and followed her consort down stream. By 1600 they were clear of the enemy's batteries, having been continuously engaged for four hours. Their escape was little short of miraculous.

There was no further opposition, and since navigation was never attempted after dark, at sunset the steamers secured to an island about 12 miles south of Jebel Rojan.

[6] *Bordein, Safieh, Tewfikia, Telahawiyeh.*

Messengers were sent out to ascertain the true state of affairs, and on their return they stated that the town had fallen on the morning of the 26th and that General Gordon had been killed. The Sudanese crews then began to show signs of disaffection.

There was much to be done that night. The wounded had to be attended to and the damage caused by the enemy's fire made good ; above all, plans had to be made for descending the Sixth Cataract. The steamers were larger than those normally used at this state of the Nile, besides which they were heavily laden with stores for the garrison and with the weight of their armour protection and guns. All unnecessary weight was jettisoned, and at 0700 on the 29th they continued down the river.

For an hour and a half all went well, but then the *Bordein* grounded on a sandbank for a short time. At 1230, the head of the cataract was reached and it was then decided to send one vessel down at a time the *Telahawiyeh* going first. The upper rapid was safely negotiated by both steamers, after which there was a reach of open water ; but at 1630 the *Telahawiyeh* struck on a submerged rock opposite Jebel Rojan and immediately began to sink. By the time the *Bordein's* boat reached the wreck all the crew, the two guns, and most of the stores had been transferred to the nugger which had been in tow ; all the gun ammunition and most of the small arm ammunition was, however, lost. Although the *Bordein* was fired at during the day, no damage was done. That evening a letter was received from the Mahdi, offering terms if the British party surrendered, and this gave rise to desertion on the part of some of the Sudanese troops.

Next day the descent of the cataract was resumed, through an intricate and difficult part, and it was deemed advisable to pass the *Bordein* down stern first, controlled by hawsers and anchors. She was driven on to a shoal by a strong gust of wind and was with difficulty refloated. Fortunately, there was no enemy interference, but so much time had been lost by these mishaps that she had to remain in the cataract for the night. Symptoms of disaffection among the native crew were growing more and more apparent, but these were checked by a false, though opportune, report that the British troops had taken Metemmeh.

At daylight on the 31st the descent of the last part of the cataract was begun, and by 1000 the *Bordein* was through, with a clear stretch of unbroken water all the way to Metemmeh. The one difficulty ahead was running the gauntlet past the fort at Wad Habeshi. All went well until 1530, when the *Bordein* was badly holed on a submerged rock off Mernet Island, about three miles above Wad Habeshi, and she immediately began to fill. She was beached on an adjacent sandy spit, but the damage was beyond repair. Guns, ammunition and stores were landed on the island, but the position was impossible for defence. The native troops could not be depended upon, so Sir Charles Wilson decided to make himself as secure as possible and await the arrival of help.

At 1845 that evening Lieutenant E. J. Montagu-Stuart-Wortley (King's Royal Rifle Corps), who had originally been one of the party in the *Telahawiyeh*, started off in the *Bordein's* boat to pull to Gubat, having with him four British soldiers and eight natives. He timed his departure so that he would pass the enemy's fort in darkness and before moonrise. When within half a mile of the fort the oars were laid in and the crew lay down in the bottom of the boat, which floated down stream close to the fort ; but before they were clear the rising moon betrayed them. Further concealment was useless, and the boat's crew gave way with a will amidst a hail of bullets. No one was hit, and at 0300 on 1st February, they arrived at Gubat. A

relief party was at once organized, and at 1400 the same day Lord Charles Beresford started for Mernat in the *Safieh*. He had about 35 miles to go. Meanwhile Sir Charles Wilson had established himself in a strong zeriba on Mernet island, opposite the wreck of the *Bordein ;* but before relief arrived, many of the Sudanese troops had deserted to the Mahdists.

Early on the 3rd, the report of a gun down stream indicated that help from Gubat was approaching, and shortly afterwards the look-out in a tree top reported that a steamer was in sight. But before long it became evident that she was in trouble, for she was seen to be anchored off Wad Habeshi and heavily engaged with the fort. Orders were then given to break up the zeriba and effect a junction with the steamer. Guns, ammunition, stores, and wounded were put on board the nugger, which was floated down to await the arrival of the rest of the party that had been landed under Captain Trafford on the right bank, opposite the north head of the island. Although they were fired on by the enemy, no serious casualties were incurred, and the force then marched down to where the disabled steamer was lying, about 500 yards from the right bank. The nugger also dropped down to the same point.

The only signaller in the force had gone with Lieutenant Wortley, so some difficulty was experienced in establishing signal communication with the steamer, and it was not until a boat had been sent that the true state of affairs was made known. It then transpired that a shot had hit the boiler, but it was hoped to have it repaired in due course. Meanwhile Sir Charles Wilson was desired to keep up a fire on the fort to divert the enemy's attention from the steamer, and to move down about two miles to some spot on the bank where embarkation would be easy and there to await the arrival of the steamer. The nugger, containing 25 sick and wounded, was to float down during the night.

One gun with what little ammunition remained was landed from the nugger and engaged the fort until dark, when it was spiked and thrown into the river. An attempt had been made during the afternoon to float the nugger down under shelter of a sandbank, but it went aground and all except the very badly wounded had to be landed ; it was after sunset before it was again afloat. Sir Charles Wilson, who had remained with the gun, then left his position and joined the main party farther down the river.

We must now see what had been happening to the *Safieh*. Lord Charles Beresford had with him a part of the Naval Brigade under Lieutenant E. B. Van Koughnet, 20 other ranks of the Mounted Infantry, two 4-pdrs., and two Gardner guns. He was also accompanied by Lieutenant Wortley.

After leaving Gubat nothing of any importance had occurred until 0700 on the 3rd, when the enemy's earthworks at Wad Habeshi were sighted, and beyond them was seen the *Bordein* aground near Mernet island. On coming within 1,200 yards of the fort fire was opened with the bow gun, to which the enemy replied. Fire was concentrated upon the embrasures of the work and the *Safieh* proceeded to run past it, but owing to the shallowness of the water the range when opposite the fort was less than 80 yards. The rifle and machine gun fire from the steamer, however, was so well maintained that the enemy was unable to fire the two guns in the central embrasure which bore directly on the steamer when she was abreast them. But having safely passed the fort and got about 200 yards beyond it, the *Safieh's* stern fire was not then so effective. The enemy was thus able to man his up-stream

embrasures, and it was then that a shot from one of these guns penetrated the boiler. There was just enough steam left to enable the disabled vessel to close and anchor off the right bank, but she was still within 500 yards of the fort which kept up a continuous fire.

The *Safieh* was then lying stern on to the fort, a position which, although offering a smaller target to the enemy, reduced her own volume of fire until, by cutting off the trail of one of the 4-pdrs. and cutting a port in the after side of the stern battery, one gun and one machine gun could be brought to bear on the fort. From then until past sunset the Mahdists were prevented from using any of their guns; and although their rifle fire was continuous, it was mostly wild and did little material damage. Lieutenant Van Koughnet, however, was wounded and a petty officer was killed. It was obvious that after dark the enemy would be able to move his guns to a position which would render their fire fatal to the steamer, and Lord Charles Beresford realized that it was imperative to have the boiler repaired by the morning and also to delude the enemy into thinking that the vessel had been abandoned, in which case it would not be worth while to re-site the guns. He therefore hauled his four boats alongside as if to get away in them, and after dark ceased firing and remained perfectly still throughout the night.

It was not until 1100 that the boiler was sufficiently cool to enable the work of putting a plate over the shot hole to be started. Nearly everyone below had been severely scalded by the escaping steam, and practically all the work had to be done by Mr. H. Benbow, Chief Engineer, with his own hands. The job was completed by 2100 that evening, and at 0500 next morning steam was again raised, every precaution being taken to prevent the escape of sparks from the wood fuel. For his services on this occasion, Mr. Benbow was promoted to Inspector of Machinery.

Day was just breaking on the 4th when the enemy perceived that the *Safieh* had not been abandoned, and that all chance of capturing her was lost. This discovery was notified by yells of rage from the fort and by a hail of bullets. No time was lost on board, and before the enemy's guns were brought properly to bear the *Safieh* had weighed anchor and was going full speed ahead. After proceeding up stream for 200 yards, where there was more room in the river, the vessel was turned and again ran the gauntlet past the fort, when all available fire was directed upon the embrasures.

The fort was passed without accident and all on board were congratulating themselves that their difficulties were over, when in the morning light the nugger, which had on board Captain Gascoigne and some sick and wounded, was seen to be hard and fast aground on a rock about 400 yards below the fort. The nugger, on the previous evening, had been worked some little distance up stream from where it had gone ashore, and had then dropped down with the current; but after safely passing the fort it had again run aground, and all efforts to refloat it had been unavailing.

The *Safieh* was anchored as close as possible to the stranded nugger, when Sub-Lieutenant C. R. Keppel and a party of men were sent over to render assistance. After removing most of the stores the nugger was eventually hauled off, under a smart fire from the enemy, and both vessels then proceeded down stream to where Captain Trafford had constructed his zeriba on the right bank. Sir Charles Wilson and his party were embarked at a spot about a mile farther down stream, and at 1745 on the 4th the whole force arrived safely at Gubat. In addition to the casualties already mentioned, two Sudanese were killed and 25 were wounded.

In the *Safieh's* action with the fort the expenditure of ammunition was :—

Gardner machine gun	5,400 rounds
Martini-Henry rifle	2,150 „
Howitzer	126 „

After the fall of Khartoum the *raison d'être* for the small Desert Column no longer existed and it returned to Korti. Before leaving Gubat the machinery of the two remaining steamers was effectively disabled and their howitzers were spiked and thrown into the river. The march back across the desert was practically unopposed, which perhaps was just as well in view of the numerical superiority of the enemy. Many years later it was learnt that Lord Charles Beresford's action with the fort at Wad Habeshi had engrained in the Mahdi[7] a wholesome respect for the capabilities of the British upon the water, and that this had had no little bearing on his disinclination to molest the Desert Column during its withdrawal.

An Autumn campaign in 1885 was at first envisaged, but this would have necessitated reinforcements being sent out. In the end, the Nile Expeditionary Force was ordered to be withdrawn from the Sudan, and the last regiment of the Force embarked at Alexandria on 9th September, 1885. The withdrawal down the river was effected by stages in perfect order, without interference by the enemy. All types of craft were used for the conveyance of stores ; the troops either marched or were carried in whalers, as was most convenient. The Navy continued to assist in this work, the river parties being under the command of Captain F. R. Boardman. Numbers were gradually reduced, the officers and men returning to their ships as soon as their services could be dispensed with. Captain Boardman himself was back at Alexandria by the evening of 13th August, when the only naval personnel left up the river were a few ratings under Lieutenant R. A. J. Montgomerie to bring down the remaining boats which were worth retaining.

Two other steamers—the *Lotus* and *Water Lily*—were also employed on the Nile during the later stages of the campaign. They were built by Messrs. Yarrow & Co., Ltd., and were steel, shallow-draught, stern-wheel vessels, as opposed to the side paddles of the other steamers ; their boilers were designed to burn either coal or wood fuel. These Yarrow boats were sent out from England in sections : the *Lotus* was put together at Semneh and launched on 3rd December, 1884 ; the *Water Lily* was put together at Alexandria and went up to Wady Halfa under her own power. The *Lotus* proceeded up the river on 4th January, 1885, and reached Korti on 3rd February, when she was employed in the Abu Fatmeh–Korti reach. She could carry 45 tons and tow 20 tons, and after the *Nassif-Kheir* was wrecked on 5th March she became invaluable. The *Lotus*, which was commanded by Lieutenant the Hon. H. A. S. Stanhope with a crew of 12 naval ratings, remained up the Nile. At the end of July, when the withdrawal was in full swing, she had passed down the Third Cataract and had reached Akasha. There she was turned over to Captain Page of the Canadian voyageurs with a crew of Gordon's steamermen, who received instruction in the use of the Gardner gun and in handling the vessel from the naval crew before they left.

These two stern-wheelers arrived out too late to take part in any fighting, but enough was seen of their capabilities to prove that a stern-wheel vessel was greatly superior to one with side paddle wheels. Like all the other steamers, however, their

[7] The Mahdi died on 20th June, 1885.

consumption of wood fuel was very high, and careful organization was necessary to keep the several wooding depots along the river properly supplied.

In conclusion, it will be seen that, although the work of the Nile gunboats in 1884–85 was confined mainly to lines of communication, as opposed to actual fighting, the assistance they rendered to the Army was incalculable.

Among the several promotions made were Lieutenants Poore and Van Koughnet to Commander, and Sub-Lieutenant Keppel to Lieutenant, all to date 4th February, 1885 ; Mr. Benbow's promotion to Inspector of Machinery was dated 30th June, 1885. And on 12th August, the thanks of both Houses of Parliament were accorded to all who had taken part in this short, but exhausting, campaign.

RUSSIAN DICTATORSHIP: THE FIRM BASE OF WORLD COMMUNISM

By Wing-Commander A. H. Humphrey, O.B.E., D.F.C., A.F.C., R.A.F.

DICTATORSHIPS can only be formed with the active or passive co-operation of a large proportion of the population. For this co-operation to be given, there must be either a genuine need for reform or at least an ill-defined feeling that parliamentary procedures can never produce sufficiently rapid and decisive action to solve the problems of the moment.

If a dictator is completely associated with a revolution based on necessary reforms, it is quite likely that his régime, having a clearly defined purpose and programme, will survive and will become more and more liberal. Mustapha Kemal formed such a dictatorship in Turkey, and his régime continued after his death under President Inönü. There is now no dictator in Turkey, but there was no collapse of the dictatorship. It was simply replaced by parliamentary government in the course of its own programme of reform.[1]

On the other hand, a dictatorship based only on a vague feeling of dissatisfaction with the inefficiencies of parliamentary government lacks both roots and long-term aims. It has a short, familiar, disastrous story. Its only guiding star is its own glorification; all individual liberties are subordinated to it; a powerful bureaucracy and a ruthless police system give it internal strength; great military forces and an aggressive foreign policy make it a power in world affairs. From this to war is only a short step, whether taken deliberately or through diplomatic miscalculation. And, as glory for the state remains the sole aim, war, once started, must continue until the state is supreme in the world or the dictatorship is overthrown.

Such were the dictatorships of Napoleon, Mussolini, and Hitler. But it is worth noting that the Napoleonic dictatorship followed immediately after a revolution based on badly needed reforms, and that, although the dictatorship was eventually overthrown, these reforms could never be undone.

The Rise of Dictatorship in Russia

"In Lenin's view . . . the organization of the Party takes the place of the Party itself; the Central Committee takes the place of the organization; and finally the dictator takes the place of the Central Committee."[2] These prophetic words were written by Trotsky in 1904. But it is most improbable that either he or Lenin really thought that the socialist state, which they sought so earnestly, would become a conventional dictatorship. Lenin thought that government by the proletariat could only be effective if power was vested in a small, rigidly disciplined party working in strict subordination to a central committee. Trotsky accepted the need for central control, but wanted a much broader party in which individual members could influence policy.

Lenin's view prevailed. But during his lifetime, although party discipline was strictly enforced, policy was decided in Congress and the Central Committee. Discussion was allowed, but rival policies could not be pursued to the point where they might split the Party.

[1] It is true that Turkey does not yet enjoy democracy in the form that we know it, but she has moved a very long way from absolute dictatorship.

[2] Leon Trotsky: *Our Political Tasks*, p. 54.

It took Stalin 15 years to transform Lenin's authoritarian government into his own absolute dictatorship. In this time he destroyed all his rivals by the most skilful and unscrupulous political manœuvring. First Trotsky went, then Zinoviev and Kamenev, and finally Bukharin and Rykov.

During his dictatorship Stalin built up a large and efficient heavy industry and, through this, great military strength. Inevitably a powerful bureaucracy was formed, a ruthless police system was developed, and many socialist ideals were discarded. Russian patriotism replaced internationalism; insistence on efficiency and hard work replaced the right to strike; privilege and incentive replaced social equality; discipline replaced Montessorism in schools; and the party line replaced freedom of thought and expression in the arts and sciences.

The Strength of the Russian Dictatorship

Outwardly there was little difference between the dictatorships of Hitler and Stalin. But this similarity was entirely superficial. Unlike the Nazi *coup d'etat*, the Russian revolution was based on a real need for reform from which the new régime drew great strength. But if this had been its only source of strength it would probably have followed in the path either of Napoleon, or of Mustapha Kemal and Inönü.

The real strength of the Russian dictatorship lies in its communist foundations—in the philosophy of Marx.

The basis of Marx's philosophy is that capitalist society is divided horizontally into two classes, the bourgeoisie, a minority who own the means of production—land, factories, etc.—and the proletariat, a majority who are the labour which alone can convert these inert properties into material riches. Consequently, the wealth of the bourgeoisie is entirely derived from the surplus effort of the proletariat, i.e. the value of the work which they do, over and above the value of the payment they receive. This being so, Marx argued, the capitalist state must depend for its wealth and power on an alliance with the bourgeoisie in the exploitation of the workers. Therefore, under capitalism, there can be no real justice for the proletariat, who must always be paid as little as possible so that their surplus effort, and consequently the wealth of the bourgeoisie and the state, can be as great as possible.

Moreover, as capitalist states strive for greater wealth and power, they must seek more workers, who alone can produce that wealth, and more property which the workers can develop. This leads inevitably to imperialism and war. Therefore, according to Marx, the basic characteristics of capitalism are the exploitation of labour, imperialism, and war between capitalist states. And these characteristics must dominate the world until the proletariat takes over all governments.

Marx argued that, when this had been achieved, there would be no private property and therefore the bourgeoisie would disappear. As there would be only one class, the surplus effort of the workers—the wealth—could be distributed to each individual according to his needs. And as the state, in its capitalist form, exists only as an instrument for the exploitation of labour, it would wither away. Therefore, there would be no more war.

Thus the aim of communism is a world-wide, classless society in which everyone's needs will be satisfied and in which war cannot occur. This is an aim worth striving for, and one which appeals alike to the intelligentsia and the oppressed. For this aim, men of all nations have been happy to sacrifice wealth and position, to suffer disgrace in the eyes of their comrades, and to die.

Believing absolutely in Marx, the Russian dictatorship has a long-term aim which gives it a strength lacked by Nazi Germany. But Marxist teaching goes further than a statement of the aim. It explains how the aim will be achieved.

From Hegel, Marx developed a theory of the inevitable success of communism. He argued that the stresses set up within the capitalist society by contradictions between labour and capital, between colonial people and imperialist powers, and between the capitalist states themselves, must in the end destroy it. But the capitalist states would resist this process, and, therefore, the aim of world communism could only be achieved by violent revolution at the appropriate time.[3] Although this revolution must inevitably occur and must succeed, Marx explained that it could be hastened by active propaganda and thorough preparation. From this, Communists draw that extra strength which comes with the certainty of ultimate success.

Stalin altered this theory slightly by explaining that, as capitalist development is uneven, there would not be one world revolution. Instead, socialism in one country would be an essential preliminary to world communism. The one socialist country—Russia—would be the headquarters of the world revolution for which Communists throughout the world would have to fight. Thus, the Russian Communist Party must be kept pure and strong at all costs, and Communists everywhere must do their utmost to strengthen and support Russia.

This is why Russian patriotism has replaced internationalism. This need for a strong base has justified ruthless discipline at home and inspired Stalin to advise caution abroad :—" Never play with insurrections . . . concentrate a great superiority of forces at the decisive point at the decisive moment."[4]

Because of this, the defection of Yugoslavia is important. She could add little to Soviet strength, but the principle that individual communist states can work independently confounds fundamental Marxist teaching.

Marx believed that everything is governed by material factors. His whole philosophy of development from feudalism to capitalism and eventually to communism is based on economics, and can only be explained by material logic. There is no place in it for ideals, personality, conscience, etc. These are all secondary to material factors. " The ideal is nothing else than the material world reflected by the human mind and translated into terms of thought."[5] It follows from this that the Communist cannot believe in any God. For him there can be no right or wrong. The only measure is :—does this action contribute to the good of the cause or not ?

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[3] Marx lived long enough to see reforms carried out which were a challenge to his basic theories. As a result, he told the First International in 1872 that there were countries such as the United States and Great Britain " where the workers will be able to achieve their aim by peaceful means." However, this is unimportant because Lenin, and all subsequent Marxists, deny that Marx ever modified the position he took up in the communist Manifesto.

[4] I have been unable to verify this quotation. It is used several times by Sir David Kelly in *Beyond the Iron Curtain*, pp. 34 and 40.

[5] Marx : *Capital*. Introduction to Vol. 1. In the passage from which this is taken, Marx was explaining that he rejected Hegel's idealist philosophy while retaining his dialectic process. The basis of Marx's materialist philosophy was derived from Ludwig Feuerbach, who held an opposite view to Hegel and maintained that matter is basic reality.

All the actions and statements of communists are meaningless unless it is realized that expediency governs everything they do, that to them right means only what helps their cause. Thus, the constitution of the U.S.S.R. gives each republic the right to secede, but such a secession is impossible because it could only be justified if it helped communism.[6]

This argument allows the communist leaders great tactical freedom while they continue to pursue their long-term aims. This tactical freedom has been exploited by Lenin, and to an even greater extent by Stalin, and accounts for their frequent reversals of policy towards their capitalist enemies.

Lenin and Stalin frequently warned against the danger to communism from attack by capitalist Powers, and Stalin added a fourth contradiction to the three which are fundamental to Marxist theory—the contradiction between capitalist and communist camps. In this way, the need for Russia to be constantly prepared for war is explained, and internal inefficiency can often be attributed to action by capitalist enemies.

Finally, an examination of the strength of any dictatorship must take account of the fact that a well-organized police state cannot easily be overthrown from within. Its collapse can usually only be brought about quickly by the tremendous strains imposed by defeat in war, or possibly by overwhelming economic disaster. The Russian dictatorship is based on a well-organized police state and is protected, by its belief in communism, from the mistakes which have so frequently led dictators into disastrous wars. Moreover, the nature of war today is, in itself, a powerful deterrent to an attempt to attain a long-term aim by unlimited war.

The Weaknesses of the Russian Dictatorship

So well did Stalin build an organization suitable for the government of a great country by a single person that it is hard to see how efficient control could now be exercised in Russia except by a dictator. One single authority would seem to be necessary, if only to maintain the balance between the four great powers—party, bureaucracy, police, and army.

It is too early to be sure whether the problem of succession after Stalin's death has been solved. But unless some man of sufficient stature can be found, Russia may enter a period of struggle for power, similar to those which followed the deaths of Ivan the Terrible and Catherine the Great. It is possible that, in such circumstances, the communist régime in Russia might collapse under the stress of some major internal crisis—in agriculture, perhaps. But it is more probable that the problem of succession will be solved, because the belief of the Russian leaders in communism, and therefore in the need for a powerful Russia, is probably stronger than any other emotion, even than the desire for power.

Paradoxically, there is a great danger for the world in a weak government in Russia. Weakness and uncertainty could produce the fatal misjudgment leading to unlimited war.

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[6] In his address to the 3rd Congress of the Russian Young Communist League on 2nd October, 1920, Lenin said: "We repudiate all morality derived from non-human and non-class concepts. . . . We say that our morality is entirely subordinated to the interests of the class struggle of the proletariat. . . . We say morality is what serves to destroy the old exploiting society and to unite all the toilers around the proletariat, which is creating a new communist society. . . . We do not believe in eternal morality."

A rapid collapse of the Russian dictatorship seems unlikely. Its real weakness, like its strength, lies in its communist foundations, and can only take effect slowly.

Time is disproving many of Marx's prophecies. The development of capitalism has brought more even distribution of wealth, not increasing exploitation of labour; co-operation, not strife, between capitalist states; self-determination, not expanding imperialism. In Russia, the state grows steadily more dominant instead of withering away, and privilege and incentive, on a scale unknown in the western world, have replaced the classless society. However, Communists have explanations for all these things. For instance, they say that there are no classes in Russia, only various grades of worker, the higher grades receiving benefits because of their greater efforts. But, in time, nepotism and inherited position may well undermine this explanation.

There are many small fallacies in communist logic. One, which influenced Mr. Douglas Hyde in his break with communism, is the argument that: "The unequal distribution of private property gives rise to social injustice. Therefore private property is wrong and should be abolished." The maldistribution of property does not necessarily prove that private property is wrong in itself. If it proves anything, it is that the distribution of property is wrong, and means must be found to spread it more evenly over the population as a whole.[7]

The case against Marxism grows steadily stronger. But each point by itself is small, and can be explained away by a true communist believer. Nevertheless, doubts about the rightness of communism will gradually grow, and if any Communist has a doubt which he cannot satisfy, his whole faith will collapse. This process can only occur very slowly, but it is probably inevitable.

Behind all the fallacies of communism is one which governs them all. It is the denial of God; the denial of any influence outside material considerations; the denial of a God-given human conscience.

If the natural ability of the individual to decide between right and wrong is denied, then some human authority is needed to lay down the correct line as defined by the material considerations of the moment. This fact made the replacement of the dictatorship of the proletariat by an individual dictator inevitable in Russia, and will prohibit an advance from socialist dictatorship to communist freedom.

Pericles said: "Happiness is freedom, freedom is courage," and outside the Bible no truer human equation has ever been stated. Happiness does not come from material wealth. It comes from individual freedom: freedom from want, prejudice, and selfish exploitation. And no freedom can be had without courage. Men will always seek happiness in freedom, and ultimately they will always find the courage to achieve it.

But what is freedom? Without the restraints imposed by discipline it is only anarchy. And the degree of discipline which is desirable and necessary for one class of people would amount to tyranny if applied to another. Reasonable freedom for an adult may amount to gross neglect if applied to a child. A degree of freedom which will encourage strength and healthy development in one class of people may lead to irresponsibility and abuse if allowed to a more backward community.

The Russians, who have never known much individual liberty, must be proud of the achievements made possible by their disciplined state. They are not likely, therefore, to seek immediate freedom from the present régime. Nevertheless, to

[7] Douglas Hyde: *I Believed*, pp. 227 and 228.

strive for liberty is a constant human endeavour, and it is reasonable to assume that the Russians will, in time, seek some relief from their present burdens. Perhaps, the first signs of a struggle for freedom will appear as minor industrial unrest.[8]

There is also a material weakness in lack of freedom in thought and expression. It must ultimately stultify scientific research.

In the end, people must ask themselves whether communism really offers a worthy summit of human endeavour. Why should social evolution stop there? What is the value of the communist aim if there is no God? Is the satisfaction of everyone's material needs sufficient in itself? Many wealthy people are profoundly discontented, yet others are happy but penniless. How can these things be explained by material considerations alone? Marxist dialectic supports rather than denies life after death, but what promise does this hold if there is no God?

The Future of the Russian Dictatorship

The Russian dictatorship is strong on its communist foundations. It remains the headquarters and firm base for an offensive which aims at a world-wide communist society. This offensive will stop short of unlimited war because that would endanger the great gains which have already been made, but it will be pressed wherever disaffection can be fomented, or local military weakness allows force to be applied safely. The free countries might, therefore, prevent the spread of communism by ensuring reasonable prosperity for all, supported by sufficient military strength. Communism may be contained, but it is unlikely to be defeated in this way.

If the communist *bloc* could be divided, the fundamental Marxist concept of a world-wide, stateless society would become unattainable through communism, and the Russian dictatorship, deprived of its aim, might be fatally weakened. Yugoslavia has shown that such a split is possible, but China is probably the only state whose defection would be certain to destroy communism. Chinese and Russian interpretations of Marx are very different, and history is full of the violence and intolerance of differing creeds. At some time in the future these differences may cause a split in the communist *bloc*, but there seems little likelihood of this at present. Russia and China, having everything to gain from alliance and everything to lose by separation, are likely to stick together.

If the communist *bloc* were split tomorrow, all chance of the achievement of world communism would suddenly disappear, and a terrible void would be formed. There would be nothing to replace the present burning faith in communism. The dictatorships, which are at present inspired by communism, would suddenly have no aim except their own glorification, and the situation would be ripe for unlimited war.

[8] Sir David Kelly has suggested that the pace of the Russian drive for production is too hot to last, and is not in keeping with the Russian character. (Sir David Kelly, *Beyond the Iron Curtain*, p. 19.)

The difficulty of defining freedom is the burning problem of today. It is at the root of almost all major differences, whether in internal politics or in world affairs. Marx's definition was "freedom is the recognition of necessity" and, as far as it goes, it is true. A different explanation of freedom was given (rather surprisingly, perhaps) by King Charles I in his speech from the scaffold. He said: "I would tell you, sirs, that the freedom and liberty of the people consists in having from the Government those laws by which their lives and their goods may be most their own." And this, perhaps, sums up the views of enlightened capitalism.

When communism is destroyed, there must be a better faith ready to replace it. The weaknesses which are most likely to destroy it are spiritual, and only by exploiting these can the free countries insure against the dangers which must follow the collapse of communism. The failure of the communist régime to stamp out religious feeling in Russia, and the inability of communism to penetrate deeply into any really religious community, are very encouraging pointers to the future. But unless the offensive against communism is governed by moral considerations, it will fail. If the free countries allow expediency to control them, they will be playing the same game as the communists and their policy will be barren of promise for the future.

Conclusion

The strength of communism is derived partly from the Marxist philosophy and partly from the ruthless methods of the police state. Paradoxically, however, the weaknesses of communism lie in the fallacies of the Marxist doctrine—in the denial of God and in the surrender of individual freedom.

The liberal development of capitalism in the free world is rapidly disproving many fundamental Marxist theories and, to this extent, the free nations are succeeding in their struggle against the further spread of communism. This struggle is nevertheless only a holding action and it is only on the material plane. No one can yet foretell the pattern of the final offensive against communism but, whatever its nature, its strength will depend on the moral calibre of the free people. If they do not understand God, they cannot understand what they are struggling against. If they do not understand the evil of communism, they will be overcome by it.[9]

History may well relate that the true purpose of communism was served by the religious resurgence which destroyed it. When communism is destroyed, the Russian dictatorship will die, but its death throes may still present the world with its period of greatest danger. The future of everyone depends on whether the Russian dictatorship dies naturally in a programme of liberal reform, or violently in a further struggle for state glorification.

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[9] "The Grizzly Bear is huge and wild
He has devoured the infant child,
The infant child is not aware,
He has been eaten by the bear."

THE INTERNATIONAL SITUATION[1]

By A. K. Chesterton, M.C.

PEACE ON THE CONFERENCE FRONT

It often seems that the fewer the international conferences called to put the world to rights the less need the world has of such solicitude. Looking back across the last 10 years, one recalls that most of the tension between nations has been the result of talk rather than of action, although perhaps there has been a sufficiency of action to justify at least some of the talk. It would be foolish to taunt the statesmen of the world with this ironic thought, but no less foolish to deny that it contains a modicum of truth. Christmas and the New Year would have been less serene had some big conference coincided with their celebration.

Indeed, since the inevitable failure of the Foreign Ministers conference at Geneva to create the accord which the Heads of Governments failed to achieve in that city two or three months earlier, the international temper—except in the Middle East—has been remarkably tranquil, notwithstanding the propaganda tour of Messrs. Bulganin and Kruschev through India, Burma, and Afghanistan. Although the fashion is now to speak and write of the ' spirit of Geneva ' as a depressant, when before it was acclaimed as a stimulant, the truth is that on the less publicized plane of international affairs it achieved all that was expected of it. For instance, the plans for pooling atomic energy resources—probably a real though undeclared objective in the Summit Conference—are being prepared with systematic thoroughness by quiet groups of functionaries working to a time-table and towards an objective devised almost as soon as the first atom was split. Those who believe that the purport of the plans is to establish an international atomic monopoly would prefer that ' the spirit of Geneva ' had indeed been the failure that is generally supposed.

AMERICAN AID POLICY

President Eisenhower, in his State of the Union Message, revealed that he had in mind an approach to Congress which if successful would make practicable the long-term planning of American aid. At present Congress votes these supplies annually. The President spoke of " a 10 years' haul," but it seems improbable that U.S. Congressmen would be prepared to surrender control of expenditure overseas for anything like that length of time.

As the position was explained to the American people it appeared that the need for the long-term organization of aid arose directly from the state of the international situation. This is now one of the accepted American political conventions. While the effect of dollar aid has been to kill two or more birds with the same stone, we should not forget that its *raison d'etre* is to dispose of the American surplus, not to bolster foreign economies. Unless this fact is kept in mind, the tendency will be to regard aid programmes as the measure of international tensions, whereas what they really measure is the gap between what Americans produce and what they consume.

EUROPE

Co-ordination of Air Defence

Following Field-Marshal Viscount Montgomery's Royal United Service Institution lecture, in which he advocated the merging of the strategic air forces of the West to form a single striking force commanded by an American, with head-

[1] As deduced from reports up to 11th January.

quarters in America, the Council of Ministers of the North Atlantic Treaty Organization has taken what General Gruenther visualizes as the first step in that direction by arranging for the co-ordination of the air defences of western Europe. "It is not possible to cut across national feelings in one great stride," said General Gruenther. "This first step will not affect national responsibility, but I hope full co-ordination of air defences will follow." As the Supreme Allied Commander and his Second-in-Command do not speak with different voices, the assumption has been that the "full co-ordination of air defences" is intended to embrace the structural unification under one command of all the western air fleets.

General Gruenther describes the process as "evolutionary." What remains to be seen is the precise stage in the process when the nations concerned recognize that the issue to be settled is one of sovereignty. So far the advocates of internationalism, by not rushing their fences, have had the field pretty much to themselves. When the issue is squarely faced, however, questions now almost never discussed will demand an answer. One such question is this: "As no system of alliances since the world began has been other than transitory, why should national defence now be based on the almost certainly mistaken notion that the present system of alliances is permanent?" It will then transpire that the attack on national responsibility for defence is in fact an attack on the Nation State. When the issue is thus clarified, the men of these Islands will have to decide whether or not national sovereignty is an absolute political value.

THE MIDDLE EAST

Cyprus

At the time of writing, substantial reinforcements have been allocated to the British Commander-in-Chief in Cyprus. The reason given is the deteriorating situation in the Middle East and the consequent need to protect British lives. That reason is none the less valid because the troops will be a welcome addition to the strength of the actual Cyprus garrison.

It seems probable that the intransigence of the hard corps of terrorists, while not ruling out an agreement with the responsible elements of the community, will make Cyprus a military rather than a political problem for some months to come. Even if there were to be found a formula that satisfied Britain, Greece, Turkey, and the moderate Cypriots, the fact must be faced that militant communism has turned the island into a field of battle.

Many Complicated Issues

The Middle Eastern complex consists of a number of interpenetrating problems, of which only one is clear-cut and easy to define. This is the situation created by the carving of the State of Israel out of Arab lands. There is nothing in the least equivocal about the passions aroused by the Arab-Israeli dispute: hate is the theme and fear the precipitating agent. Curiously, however, the emotional unity which pervades the Arab world whenever the Jewish State is contemplated has no effective political concomitant. If anything, the resultant tensions have sharpened and intensified the struggle for paramouncy among the Arab nations.

Nor is the Arab fight for the leadership of the anti-Israel cause the only complicating factor in the general set-up. Western strategical planning has led to the formation of the Baghdad Treaty system, which in effect extends the right wing of the North Atlantic Treaty Organization to the eastern frontiers of Pakistan.

Although the United States has not officially adhered to the Baghdad Treaty, its close relations with Great Britain and the importance it attaches to the friendship of Turkey and Pakistan, both of which countries it loads with military aid, preclude any possibility that the Treaty operates outside the purview of the State Department and the Pentagon. Yet Egypt and Saudi Arabia, countering the power of Iraq within the Arab fold and of Turkey in the larger Middle Eastern context, find themselves aligned against the Baghdad Treaty nations, despite the fact that as beneficiaries of American loans and aid they are themselves spheres of American influence. Thus Washington has somehow to reconcile support for her Baghdad Treaty allies with support for the Treaty's Egyptian and Saudi Arabian opponents. To make confusion worse confounded, the Israeli lobby is beyond doubt the most formidable pressure group in the United States, so that if ever there were a place and a time for Washington to aspire to be all things to all men that place and that time are the contemporary Middle Eastern scene.

British Initiative

It may be for this reason that Great Britain was left to take the initiative in proposing a basis for an Arab-Israeli settlement. Sir Anthony Eden in the course of his Guildhall speech suggested that a compromise over Israeli's frontiers might indicate the means of reaching a final solution of the problem, but while the Arabs gave the proposal a friendly welcome it was scornfully rejected by Israel, and the British Prime Minister has probably not yet experienced the last of the painful repercussions which resulted from the unleashing of Jewish wrath against him. When these notes appear in print, Sir Anthony and the Foreign Secretary will have been to Washington for their deliberations with American leaders and it may be that some kind of formula has been evolved to meet the needs of the Middle Eastern crisis. What is improbable is that the formula, whatever it may be, will have the slightest chance of giving satisfaction to both sides either in the main dispute or in the Arab disputes on the side-line.

Meanwhile the rioting in Amman reflects both the temper and the confusion of the times. To the present commentator the question of securing the adherence of Jordan to the Baghdad Treaty does not seem to be of over-riding importance, but the western strategists presumably had good, if undisclosed, reasons for wishing to forge this particular link in the chain, whatever the risk of political unsettlement and contrived disorders that might be incurred. It would be unrealistic to suppose that General Sir Gerald Templer flew to Amman on the instructions of London without the explicit approval of Washington having been first obtained, so that the organizers of the riots showed evident realism in arranging for American as well as British property to be attacked. Yet Egypt—whose Cairo radio provided the incitement—was at that very time negotiating with the American and British Governments and the World Bank for the furnishing of the vast loans necessary to finance the Aswan Dam project, while Saudi Arabia—said to be finding £20,000 a day to sustain the rioting—waxes fat and prosperous on the royalties paid by the American oil company working the concession. In a situation of this kind, where so many swirling cross-currents are in motion, it is permissible to wonder whether Israel, on the age-long principle of ' divide and rule,' may not be taking a big hand in the game.

Russia's Intervention

The entry of the Soviet Union upon the Middle East scene, with offers to Egypt of large-scale economic aid and the actual provision of some military help in the

shape of Czech weapons, is perhaps of less immediate significance than most people have imagined. Colonel Nasser adroitly used the Russian intervention to expedite negotiations for the financing of the Aswan Dam and he also managed to secure several shipments of western arms, not all of the first quality. There is very little doubt that the importance of the Russian offer was greatly exaggerated, by Cairo as well as by Moscow, and it would appear no less certain that much more was made of the Czech arms than the consignments either justified or are about to justify.

As the Middle East has become a Tom Tiddler's ground, Moscow naturally wishes to exercise its natural aptitude for intrigue, but neither geography nor Islam present it with any compelling reason for putting forth a major effort in this region. Being realists, the men of the Kremlin are unlikely to place any false hopes on their opportunities here, which is why a strict watch should be kept along the rest of the Eurasian demarcation line. The Russian noise in Cairo has all the blundering over-emphasis of a calculated diversion.

THE FAR EAST

South-East Asian Developments

While the Middle Eastern picture is full of disquieting confusion, that of South-East Asia is perhaps even more disquieting because of its increasing clarification. However violent may be the fight for the British succession, there is no disputing that the British are assuredly on the way out of Malaya and Singapore, in much the same fashion as the French are nearly out of Indo-China and the Dutch are quite out of Indonesia. So clear has this fact become that it is accepted almost without comment. Mr. David Marshall, the Chief Minister of Singapore, has visited London to secure a conference in the Spring which will arrange for immediate self-government, with control of foreign affairs and defence reserved to the British Government. These reservations, however, are unlikely long to survive the transference of fiscal power and power of police. As readers familiar with Singapore newspapers are aware, Mr. Marshall's constant theme is not ' self-government ' but ' independence.' By appearing to concede control of foreign affairs and defence to Great Britain, he has managed to convey quite a different impression to people in this Country. As it happens, a Singapore Government intent upon ' independence,' once it had secured control of internal security, could make the position of a Power charged only with external defence quite untenable. Moreover, by one sweeping economic enactment which I shall discuss in a minute, the external control of foreign affairs could also be turned into a mockery.

Tengku Abdul Rahman, Chief Minister of Malaya, is following the Chief Minister of Singapore to London, but not to request a conference which will fix a date for the transference of power. This decision has already been made, either by the Tengku or by some undisclosed authority. Interviewed on his arrival at Bombay, Prince Abdul Rahman made this unequivocal declaration : " On August 31st, 1957, Malaya will proclaim her independence." Whether or not the British Government had previously assented to that date is not at present known, but it has clearly not dissented from the act. It will be noticed that the Malayan Chief Minister wasted no time on words such as ' self-government.'

Britons to be Replaced

What is intended in Malaya was made even clearer by the Tengku's further statement, on the same Bombay occasion, in which he said : " The lessons of the Indian independence movement stand us in good stead in wresting power from the

British. Our freedom fight is smooth and methodical and we are trying to emulate the example of India."

As he sees the future, no wrack of Britain's power, used so beneficently in service to Malaya, is to be left behind to serve as monument. Indeed, before setting forth on his visit, Prince Abdul Rahman had already given warning to British advisers and other officials that they would be served with notices to quit. Both he and Mr. Marshall make quite clear that Britons now in the administrative service will be replaced by men of other nations, notably by Indians. Why an Indian as such is preferable to a Briton as such has not been explained.

One cardinal question, moreover, has still to be answered. It was asked by the Sultan of Johore on the occasion of his Golden Jubilee. Who is to defend the country once the British troops are withdrawn? The Tengku absented himself from the celebrations in protest at the question, but he made no attempt to answer it. It may be at the time that he trusted to peace talks, which he and Mr. Marshall were to hold with the Chinese guerilla leader, to bring the jungle war to an end and liquidate the communist menace. The talks were held, but they brought no peace. Thereupon Abdul Rahman, much incensed, announced his intention of throwing his full weight on to the scale to crush the terrorists—surely a somewhat belated decision for a responsible citizen to make. That the Prince and his followers will succeed in keeping the ring now held by 20 British battalions is, to say the least, doubtful.

Major Economic Move Ahead?

Although intentions about the future defence of Malaya have still to be disclosed, not all the plans for the regime which will replace the British administration have been shrouded in secrecy. One plan, which has received much publicity, is for the establishment of a Central Bank, which is being advanced as a necessary institution for ensuring that Malayans themselves exercise control over their dollar earnings. Whether that control will in fact be invested in Malayan hands remains to be seen. This brings me to the topic I promised to discuss—a sweeping move which would make any kind of continuing British influence in Malaya or Singapore impossible. Is it proposed, within a year or two, to take South-East Asia out of the sterling area and make it a part of the dollar area?

When I asked a similar question about the future of Indo-China—it was at the time the French were fighting their last grim battle of Dien Bien Phu—there were not wanting critics who accused me of undue suspiciousness and lack of charity. Yet on 1st January of this year the Government of South Vietnam abandoned the franc zone and joined the dollar group of nations. It is my belief that the same fate awaits Malaya, and that much of the agitation against our remaining in that country has been caused by powerful interests anxious that Malayan rubber and tin should pass into the possession of the dollar area, an arrangement which—among many other things—would make the rest of the sterling area even more responsive to dollar diplomacy than it is today.

Plans for Federation

There are other plans, long adumbrated, for the future of South-East Asia to which much thought is now being given. Speaking to Singapore Rotarians before his London visit, for instance, Mr. Marshall put in a claim for the headquarters of various United Nations agencies to be located in that city, and stressed the advantages

it would enjoy as the capital of the South-East Asian region. The Chief Minister has been in close touch with the Indonesian leaders and doubtlessly discussed with them the desirability of some kind of federal integration. Tengku Abdul Rahman has also been concerning himself with problems of regional integration and has suggested a federation which would consist of Malaya, Singapore, Brunei, Sarawak, and North Borneo. It might seem, therefore, that there are other parts of the British Empire which we may soon be asked to leave.

Mr. Marshall is said not to favour the precise ideas for federation entertained by the Tengku, but as their reported difference over this matter has not impaired their working together on all other projects of mutual concern we may assume that they are adopting an empirical approach to the question. What is certain is that a South-East Asian Federation will assuredly come into being, and that attempts will be made to include in it Indo-China as well as Indonesia and Malaya. Who will direct the destinies of such a Federation? That is a question which I do not feel impelled to answer, but can any serious student of affairs doubt that there will be a concerted effort to ensure that Britain, France, and Holland will have little or no part in its administration?

A MATTER OF FACT—THE STUDENT'S VIEW

By Lieutenant-Commander D. W. Waters, R.N. (Retd.), F.R.Hist.S.

" The beginning of all good success, is good council and direction : the accomplishment is expedition.

" In council nothing availeth more than to follow good examples. . . . If then we would reform the disorders of our proceedings in wars, what course is better than to consider what provision is to be made, and how it is to be employed so that neither the enemy shall have cause to rejoice or hope, nor we cause to lament or fear, and how we may avoid future dangers. . . . Hard I know it will be to return back for customs inveterate are not easily rooted out.

" I aim at delays, irresolutions, niggardliness, I have no meaning to touch anything that may sound to any man's hurt but that thou mayest the better address thy affairs if thou hast any charge in wars."

Mathew Sutcliffe, *The Practice, Proceedings, and Lawes of armes described . . . and confirmed both by ancient and modern examples and precedents.* (London, 1593.)

I

THE winning of the Battle of the Atlantic was the prerequisite to victory in the West. Upon its issue depended the whole of the Allied war effort. The evidence in support of these two statements is copious, authoritative, and incontrovertible. Much material relating to the means whereby the Battle of the Atlantic was won has been published. Study of this material reveals that the action of V.L.R. (very long range) shore-based anti-submarine and shipborne anti-submarine and fighter aircraft, when co-ordinated with that of the surface anti-submarine convoy escort and support forces, was a decisive factor. From this it follows that the solution of the problem of the provision and employment of V.L.R. and of shipborne aircraft was fundamental to the achievement of the Allied aims in the West ; that it was, in short, of vital importance.

In the recent correspondence in this Journal on *Max Horton and the Western Approaches*, Marshal of the Royal Air Force Sir John Slessor took Rear-Admiral Murray to task for " some criticisms of the Royal Air Force and Coastal Command system," casting doubts upon the credibility of various statements of ' fact ' concerning the Battle of the Atlantic given by Rear-Admiral Murray, and asserting that his statement about the provision of V.L.R. aircraft was a " serious misstatement " and " an excellent example of the dangers of people without specialized knowledge commenting on rather complicated subjects without carefully checking their references."[1] Sir John Slessor then gave what he termed " a look at the true facts " about V.L.R. aircraft. From this subject he passed on to escort carriers and ' mac-ships ' (merchant aircraft carrier ships), giving what he claimed to be " the actual facts " of what he called Rear-Admiral Murray's " very odd version of history " relating to them.

Because the whole of the North Atlantic Treaty Organization will disintegrate unless it is able to ensure the safe passage of ships across the Atlantic—the issue upon which the outcome of the last two world wars has depended—the question of the provision of maritime aircraft deserves serious and meticulous consideration by the present generation of students of war. This subject is fraught with a certain sense of urgency by the fact that the same sort of problem that arose in the 1939–45 War

[1]See Journal for May, 1955, p. 280 *et seq.*, and Journal for August, 1955, p. 466

had arisen in the 1914–18 War, and that 33 years elapsed and the 1939–45 War intervened before this Country brought into service shore-based aircraft designed specifically for maritime duties.[2] This may explain why, as Sir John Slessor put it in his letter, " It is always fashionable to criticize the R.A.F. for their delay in producing suitable aircraft for the war at sea." Thirty-three years *is* a long time.

However, the subject of the provision, employment, and effect of maritime aircraft in the last war is too serious and too urgent to admit of any but the most impartial enquiry, particularly for the student earnestly seeking to avoid the mistakes of past wars and to consider what provision is to be made, and how it is to be employed to avoid future dangers. Therefore, despite the difficulty inherent in all such enquiries when they follow so soon upon the events enquired into, the attempt must be made if historical experience is to be correctly assessed for the guidance of our captains of war, present and future. As Richard Morysine put it, over 400 years ago, in dedicating his *Stratagemes of Warre*, to King Henry VIII, " I, intending here to serve my country, set out the stratagems used by the noblest captains that, by reading and reasoning thereof, your grace's captains shall not only increase and nourish their imagination, invention, and dexterity in using like sleights, but easily escape all traps, gins, and inbushments laid for them ; for it can hurt no man to see those things practised by ancient captains which may give good occasions both warily to invent new policies and wisely to use the old."[3]

II

To dispose first of the matter of the comparative flying effort on anti-submarine missions in the 1914–18 and 1939–45 Wars, raised by Rear-Admiral Murray. It would appear that Rear-Admiral Murray's statement of 14,000 hours a month in 1918 was a paraphrase of the statement in the paper read at this Institution by Rear-Admiral Bellairs, *Historical Survey of Trade Defence since* 1914, that, " During the last six months of the war [shore-based anti-submarine aircraft operated in home waters] on the average sighted 28 and attacked 19 U-boats and flew on anti-submarine operations 14,000 hours monthly—a record, it may be remarked, not achieved in the 1939–45 War until mid-1943."[4] The statement made by Rear-Admiral Bellairs is found to be correct. Rear-Admiral Murray was in error both in comparing this figure to that of Coastal Command as a whole and in stating that it was the flying effort of the ex-R.N.A.S. (as a whole). As was explained in Rear-Admiral Bellairs's paper, it excluded the anti-submarine flying effort of the aircraft in the Grand Fleet and in all overseas theatres. It thus represented only a proportion of the anti-submarine flying effort of the ex-R.N.A.S. component of the Royal Air Force (created in April, 1918).[5] But as Sir John Slessor has rightly pointed out, Rear-Admiral Murray's error was a comparatively minor detail. Being so it will hardly seem to the student to provide sufficient grounds for considering Rear-Admiral Murray's other statements ' suspect.'

III

Turning to the question of the provision of V.L.R. aircraft and of shipborne aircraft the student finds, as already remarked, that Sir John Slessor called Rear-

[2]See this JOURNAL for August, 1954, p. 367. The Shackleton came into squadron use in 1951.

[3]Morysine, Richard (1539), *The Stratagemes of Warre.*

[4]See this JOURNAL for August, 1954, p. 367.

[5]See Jones, H. A. (1937), *The War in the Air*, Appendices. Appendix XVII, and this JOURNAL for August, 1954, p. 366.

Admiral Murray's version of the V.L.R. problem a "serious misstatement," and invited him to "look at the true facts." Sir John then gave in very brief compass part of the story of the Liberators Mk. I, Mk. II, and Mk. IIIA. It is, of course, a long and complicated history, and in compression it is inevitable that some facts must be excluded and others presented. The student's task is to attempt to ascertain all the pertinent facts of a problem. In doing so he should isolate the question whether an alleged fact is correct or incorrect from the question whether it is congenial or distasteful, favourable or unfavourable, to the point at issue. In other words, he must attempt to find the pertinent facts impartially and to express them with impassive precision. This at least should be his aim if his researches are to be of practical value. In presenting his facts concisely he must select from the wealth at his disposal only those which, correctly ordered, convey, to paraphrase Robert Louis Stevenson, a correct impression.[6] On this basis the student of history who verifies his references carefully is forced to conclude that Sir John, in the process of selecting his facts relating to V.L.R. aircraft, discarded a number which, because of their pertinence, should have been retained: he finds, moreover, that Sir John allowed a serious misstatement of fact to creep into his version. This necessitates a re-evaluation of the evidence available on the provision and conversion of aircraft for V.L.R. duties, and on the contribution of carrier-borne aircraft to the Battle of the Atlantic.

IV

Rear-Admiral Murray contended that the Admiralty experienced great difficulty and delay in obtaining V.L.R. aircraft from the Royal Air Force because of "other priorities inside the R.A.F." Sir John Slessor refuted this contention and counter-claimed that "if Rear-Admiral Murray had enquired a bit deeper he would have found the story of V.L.R. aircraft for Coastal Command was a ceaseless struggle to extract this type from the U.S. authorities." In order to make a just appraisal of these conflicting views the student, as stressed by Sir John, must verify his references. In this process he will be led, sooner or later, to ascertain the views of the Commander-in-Chief most directly concerned with the provision of V.L.R. aircraft during the period under review, namely, those of the Commander-in-Chief, Coastal Command, between June, 1941, and February, 1943, Air Chief Marshal Sir Philip Joubert de la Ferté. Moreover, because this Commander-in-Chief was the operational authority most directly concerned with the problem he will have to consider his views on it peculiarly pertinent.

What the student finds is that Air Chief Marshal Sir Philip Joubert de la Ferté, in discussing the difficulty his Command experienced in obtaining V.L.R. aircraft, attributed the first allocation of Liberators Mk. I to Coastal Command to a "fortunate chance." "Bomber Command," he states, "decided that Liberators, American heavy four-engined aircraft, were unsuitable for night bombing because of the very visible flame from their exhaust pipes, which was a great help to the enemy night-fighters. Coastal Command therefore obtained the reversion of a small order for these aircraft . . .". The student will consider this statement pertinent to Rear-Admiral Murray's case, not less so because it is immediately preceded by another; that the need for "very long range aircraft to accompany the convoys when they were far out in mid-Atlantic, and to search out the U-boats on their more remote patrol lines" had been urgent for some time, "but" that "at every point the requirements of Bomber Command and the priority that was given to its needs

[6]Stevenson, R. L. (1881), 'Truth of Intercourse,' in *Virginibus Puerisque.*

thwarted our desires and intentions."[7] Again the student will consider it pertinent to Rear-Admiral Murray's case that the suggestion by the Commander-in-Chief, Coastal Command, in early 1942 that Lancasters—a long-range British bomber just coming into service—should be converted for V.L.R. work was rejected,[8] more particularly as research shows that their adaptation for V.L.R. work was practicable. Thus, to bomb the *Tirpitz* in Tromsö Fjord, it was found practicable at very short notice in November, 1944, to fit 29 Lancasters with extra fuel tanks, for them to carry, in addition to the weight of the extra tanks and fuel, a bomb load (a 12,000 lb. 'Tallboy') six times the weight of a V.L.R. Liberator's depth-charge load of 2,000 lb., and to fly a round trip of over 2,000 miles.[9]

In the Autumn of 1942 the bitterest convoy actions of the war were fought-out in mid-Atlantic, in the Greenland 'Gap' as we termed it. These battles, recounts the R.A.F. History, *Royal Air Force*, 1939–1945, *Vol. II*, "displayed at least two consistent features. One was the gallantry and skill with which the surface escorts harassed the attackers, the other was the fact that the attacks began when systematic air escort ended and ended when systematic air escort began."[10] There was, in fact, nothing new in this. It had been a consistent feature of the 1914–18 War,[11] and of all convoy battles since the start of the 1939–45 War. It was exceptional for a ship to be sunk in a convoy that had air as well as surface escort.[12] In the Summer of 1942, as Sir John stated, we were receiving Liberators Mk. IIIA and, as he stated, by the end of September 32 had been delivered, four more were delivered in November, seven in December. Sir John averred that, "as many as the Americans let us have went straight into Coastal Command via the modification centre at Prestwick." This, unfortunately, was not so. On verifying his references the student finds that it was not until "December, 1942," that "the conversion of more Liberators for very long range convoy work was commenced."[13] Sir John Slessor's error of fact is doubly unfortunate. It has the effect of substantiating on the one hand his contention that "the story of the V.L.R. aircraft for Coastal Command was a ceaseless struggle to extract this type from the U.S. authorities," and on the other that "There was no question of 'other priorities inside the R.A.F.'" affecting the provision of V.L.R. aircraft.

The struggle with the U.S. authorities is indeed part of the story, but it is not, as Sir John Slessor had evidently been led to believe by the facts he presented, the whole story. Even after setting aside the views of the Commander-in-Chief, Coastal Command, of the time on the question of the provision of aircraft for conversion there remain the facts about conversion. Conversion was, indeed, the crux of the V.L.R. problem. Once Liberators Mk. IIIA began to be obtained the V.L.R. problem could

[7]See Joubert de la Ferté, Air Chief Marshal Sir Philip (1952), *The Fated Sky*, p. 208.

[8]*Ibid.* Joubert de la Ferté, Air Chief Marshal Sir Philip, op. cit., p. 222, and (1955) *The Third Service*, p. 155.

[9]Churchill, W. S. (1952), *Closing the Ring*, p. 246; Brickhill, P. (1951), *The Dam Busters*, p. 218; Richards, D., and Saunders, H. St. G. (1954), *Royal Air Force*, 1939–1945, *Vol. II.*, Appendix V.

[10]Richards, D., and Saunders, H. St. G., op. cit., *Vol. II*, p. 105.

[11]See this JOURNAL for August, 1954, p. 367, and Jones, H. A. (1937), *The War in the Air*, *Vol. VI*, pp. 345, 349.

[12]See Joubert de la Ferté (1952), *The Fated Sky*, pp. 213–14, p. 222. See Richards and Saunders (1953), *Royal Air Force*, 1939–1945, *Vol. I*, pp. 224, 351. See this JOURNAL for August, 1954, p. 372.

[13]See this JOURNAL for August, 1954, p. 373.

be solved only by their conversion for V.L.R. work. This was an Air Ministry responsibility. For over a year the Admiralty and the Commander-in-Chief, Coastal Command, had been pressing urgently for V.L.R. aircraft yet, the student finds, critical months slipped by after Liberators Mk. IIIA began to be received from the U.S. authorities before their conversion was put in hand. He must conclude, therefore, that the deeper enquiries recommended by Sir John do not substantiate his contentions, but that they do substantiate Rear-Admiral Murray's contention that " other priorities inside the R.A.F., over which the Admiralty had little influence, made it impossible for Coastal Command to obtain these essential V.L.R. aircraft, in the numbers necessary for the Battle of the Atlantic, until March, 1943." He therefore finds it understandable that there should be, in Sir John's words, " some criticisms of the Royal Air Force and Coastal Command system." Indeed, when he considers how crippling were our shipping losses and how heavy the loss of life at that time, and that these losses were inflicted on our ships in convoy only in the absence of aircraft, he finds such criticism not unreasonable. The issue at stake was nothing less than our ability in war to ensure the safe passage of " that which was, and is," in the words of Oliver Cromwell, " the strength of this nation, the shipping."

Over the " actual facts " relating to escort carriers, Sir John is, if he will forgive the metaphor, a little at sea. It is, of course, a rather complicated subject and does require some specialized knowledge in the selection and presentation of relevant facts. The first escort carrier, H.M.S. *Audacity*, was ordered in 1940 and came to sea in September, 1941. At that time the ' air gap ' in the Atlantic made the U.K.–Gibraltar convoys most vulnerable to attack. Both fighter and anti-submarine aircraft were required with the convoys to attack enemy aircraft and U-boats operating against them beyond the range of our shore-based fighter and anti-submarine aircraft. The only solution lay in providing aircraft to operate from ships accompanying the convoys. One interim measure had been the provision of fighter aircraft to catapult-fitted naval and merchant ships, ' F.C. ships ' (fighter catapult ships) and ' camships ' (catapult aircraft merchant ships) ; another, necessarily longer term, measure was the provision of escort carriers to operate aircraft for anti-submarine as well as fighter attack. The first 'F.C. ship,' H.M.S. *Pegasus*, began to operate at the end of 1940 with Gibraltar convoys. In April and May, 1941, she was joined by more ' F.C. ships ' and the first ' camships ' which operated with trans-Atlantic and Gibraltar convoys. H.M.S. *Audacity* helped to fill the shore-based fighter and anti-submarine aircraft Gibraltar ' gap ' with conspicuous success from September up to December, 1941, when she was sunk.[14]

Before H.M.S. *Audacity* was in operational service the Admiralty had obtained authority to convert merchant ship hulls into escort carriers, and other escort carriers were requested from the United States under Lend-Lease. By the time these were coming into service in the Summer and Autumn of 1942 they were required for operations which no shore-based aircraft could execute and which, because of their direct military importance, took precedence over the North Atlantic trade convoy anti-submarine operations. The tasks of the escort carriers then were to provide fighter and anti-submarine aircraft to the military supply convoys to and from North Russia in the shore-based aircraft ' gap ' in the Arctic Ocean, and to provide fighter and anti-submarine aircraft to the North African invasion and follow-up convoys of operation " Torch " in the shore-based aircraft ' gap ' in the central Atlantic and on the U.K.–North African invasion routes. With the initial " Torch "

[14]Roskill, S. W. (1954), *The War at Sea*, 1939–1945, *Vol. I.*, pp. 362–63, 476–77.

convoys the aircraft of the escort carriers had also to provide the fighter and other air support essential for the military success of the opening phase of the landings, because no shore-based aircraft could do these tasks. Until March, 1943, these essentially military commitments took complete priority. Then, with the return of daylight to the Arctic, the North Russia convoys were suspended. This action, together with the success of the North African landings which made possible the operation of shore-based aircraft from North African airfields, released surface anti-submarine vessels and escort carriers and their aircraft to provide anti-submarine escort and support to the North Atlantic trade convoys.[15] To the student of the Battle of the Atlantic these facts are relevant because they explain, which Sir John did not, why " it was three and a half years after the outbreak of war before the first aircraft carrier appeared in the gap "—the Greenland ' gap.'

It transpires that one escort carrier, U.S.S. *Bogue*, not two, as stated by Sir John, began to operate in this ' gap ' in March, 1943 : H.M.S. *Biter* began in April, and H.M.S. *Archer* in May, in which month—not June—the first ' macship ' sailed with a trans-Atlantic convoy.[16]

To the student these inaccuracies in Sir John's version of escort-carrier activities in the Greenland ' gap ' between March and May, 1943, are of less importance than his omissions. Nevertheless, together they serve as a timely reminder to the student of the difficulty of not giving an impression of superficial research work, and of presenting its results in such a way that they convey a correct impression.

Thus Sir John preceded his statement, " but it was three and a half years after the outbreak of war before the first aircraft carrier appeared in the gap "[17] by the observation that " it is always fashionable to criticize the R.A.F. for delay in producing suitable aircraft for the war at sea." In doing so he conveyed, to the student's mind, no doubt unwittingly, the impression that such criticism would be better directed on the apparently (the contributory facts have been omitted) tardy appearance of escort carriers in the Greenland ' gap.' But, recalling the motto which heads each page in the books of the Lung Ming Academy, " The student must first learn to approach the subject in a spirit of doubt," the prudent student will verify his references. This done he will conclude that his impression was mistaken.

Again, on checking his references he will find a mistake in Sir John's version of Rear-Admiral Murray's statement that it was " provision of aircraft from *all* these sources " [i.e. *V.L.R.*, escort carriers, and ' macships '] that " enabled Admiral Horton to take the offensive in ' the gap ',' namely, omission of the word ' all.' He will therefore find that it was through making this mistake that Sir John gave himself the appearance of just grounds for castigating Rear-Admiral Murray's statement as " a very odd version of history." Indeed, reference to Rear-Admiral Murray's statement in its original wording and context not only reveals the unfortunate omission of the key word ' all ' from Sir John's version of it, but also that Rear-Admiral Murray's does convey a correct impression of the contributory means that enabled Admiral Horton " to take the offensive in ' the gap '."

" The difficulty of literature is not to write, but to write what you mean ; not to affect your reader ; but to affect him precisely as you wish," lamented Stevenson

[15]Churchill, W. S. (1952), *The Second World War, Vol. V. Closing the Ring*, p. 228.

[16]See this JOURNAL for November, 1947, p. 550. *Merchant Ship Aircraft Carriers.*

[17]This statement is not strictly correct. In October, 1939, the aircraft carrier *Furious*, with H.M.S. *Repulse*, was " sent to cover a Halifax convoy already at sea and thereafter to operate to the south and east of Greenland." Roskill, op. cit., p. 75.

with feeling. And the student echoes his *cri de coeur* when he studies the summary Sir John gives of the escort carriers' achievements in the Greenland ' gap ' in the Spring of 1943, and his wording of the subsequent contribution of ' macships ' to the Battle of the Atlantic. From these the student gains the impression that the activities of both escort carrier and ' macship ' aircraft were of little importance in comparison with those of shore-based aircraft covering the North Atlantic convoys. He will reflect, however, that the Battle of the Atlantic was won—in May, 1943, our anti-submarine forces gained what the Commander-in-Chief, Western Approaches, called " a clear-cut victory over the U-boats "—as a result of the integration of surface and aircraft activities, and of these with merchant ship movements ; [18]and that amongst the most potent weapons that Admiral Horton used " to take the offensive in ' the gap ',' " were support groups of surface vessels, of which Sir John makes no mention. This apart, however, one result of the citation of figures of U-boat kills by aircraft from carriers operating in the Greenland ' gap,' March to May, 1943, and of all shore-based aircraft covering North Atlantic convoys during the same period, is that the student gets the impression that he has been given a sound basis for assessing the relative efficacy of such aircraft. But upon further reflection he perceives that such statistics, to paraphrase the Chairman of the General Electric Company, are like a Bikini on a Bathing Belle—what they reveal is suggestive, what they conceal is vital. Thus they conceal the fact that the activities of the carrier aircraft were confined to providing escort and support to convoys beyond the reach of the available shore-based aircraft, namely, in the crucial Greenland ' gap,' that they comprise the kills made by the aircraft of first one, then two, finally three escort carriers operating here as compared with the kills made by all aircraft operating from all shore bases within reach of all North Atlantic convoys in and outside the Greenland ' gap ' and throughout the whole of the three months under review. Thus the figures of the various types, sizes, and numbers of aircraft involved, and of their hours flown—absolutely vital statistics when comparison is implied or attempted—are omitted. In short, no basis exists for assessing the comparative effort per kill. Likewise concealed are the vital statistics of ships saved from attack in threatened convoys. But there are other factors omitted not less vital because they cannot easily be reduced to statistical form, namely, weather conditions, convoy movements, U-boat dispositions and intelligence, to all of which the various aircraft's activities were related, and by which they were affected. However, the various figures and factors, whatever they were, amounted to this, that from March, 1943, carrier anti-submarine aircraft began progressively to operate with threatened trans-North Atlantic trade convoys when and wherever shore-based aircraft could not. This, in sum, is *the* vital fact concealed.

U-boat kills are but one yard-stick—and a very inadequate one—of many necessary for correctly measuring the progress of an anti-submarine war, or the contribution to it of a particular A/S craft. The student who handles it must be wary lest, like the rod in the hands of St. Paul, it turns into a viper to confound him Thus, on the basis of U-boat kills alone, aircraft of all types were quite useless in the whole of the 1914–18 War, for they made none, and were virtually so for the whole of the first half of the 1939–45 War as, until July, 1942, it was exceptional for an aircraft to sink a U-boat.[19] Yet this deduction—from U-boat kills—is, the student knows, a travesty of war experience. Throughout the 1914–18 War and throughout the 1939–45 War, when employed on convoy escort and support tasks in conjunction with

[18]Chalmers, Rear-Admiral W. S. (1954), *Max Horton and the Western Approaches*, p.203.

[19]Cmd. 6843. *German, Italian, and Japanese U-Boat Casualties during the War*, H.M.S.O., June, 1946.

surface anti-submarine vessels, aircraft prevented successful attacks with a regularity so consistent that it is frequently a source of incredulity. In fact, aircraft operating in these roles made a decisive contribution to the object of anti-submarine operations irrespective of whether they themselves could or could not kill U-boats; they prevented U-boats from sinking ships—the U-boats' sole object. Thus the student finds that in January, 1942, an audience at this Institution was reminded that, " the fact that encounters with the enemy [by aircraft of Coastal Command on convoy escort] are rare does not mean that this form of escort is unprofitable. There is plenty of evidence to show that the very presence of aircraft has kept off many unseen threats and preserved many thousands of tons of shipping."[20] Moreover, in addition to their decisive deterrent effect, aircraft frequently co-operated with surface craft in actions which resulted in the killing or maiming of U-boats they themselves were unable to harm. In both world wars this was as true of aircraft operating from ships as of aircraft operating from airfields or flying-boat bases; inevitably so since aircraft carriers of all descriptions, including ' macships,' were no more than self-contained mobile aircraft bases. They were but the means to an end, to get aircraft at the right place at the right time—a convoy under threat of attack.

" The advantage of time and place in all martial actions," wrote Drake with pungent directness to Queen Elizabeth I in 1588, " is half a victory; which being lost is irrecoverable."[21] Escort carriers and ' macships ' conferred just that advantage. Until they came upon the scene that advantage was lost and was irrecoverable. In convoy battle after convoy battle it was lost and was irrecoverable as soon as the shore-based aircraft, because they themselves had lost the advantage of time and place, had to abandon the convoys to the wolf-packs.[22] To the student it is therefore irrelevant to " doubt " as Sir John did, " if Doenitz or his captains ever so much as suspected " the " existence " of ' macships.'[23] The student knows it was not airfields, escort carriers, or ' macships ' *per se* that confounded their politics, but the aircraft operated from them; and that, in the absence of shore-based and escort carrier aircraft, it was the aircraft from ' macships ' that frustrated the U-boats' knavish tricks. Moreover, he knows that, in the long-drawn, stealthy, merciless battles fought to bring threatened convoys unscathed through the U-boat packs and patrol lines in the last two years of the war, " M.A.C. Ship aircraft were also extremely useful in rounding up ships that had ' straggled ' " and which would otherwise have fallen prey to lurking U-boats; that for this task—which the student knows is as vital and unremitting as it is unspectacular—it was claimed that " one M.A.C. Ship was equivalent to four escort vessels."[24]

Indeed, the student finds that the figures of ships saved provide a surer measure of the success of anti-submarine operations than do those of U-boats sunk. Thus in this JOURNAL it is recorded that, " of the tens of thousands of ships convoyed across the Atlantic between September, 1943, and the end of the war in May, 1945," the period during which integrated air escort was provided by shore-based, escort carrier, and ' macship ' aircraft, " U-boats sank less than 20."[25] This he finds a more graphic measure of the defeat of the U-boats than the figure of 70 U-boats sunk by the Atlantic convoy escort and support forces during this period.

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[20]See this JOURNAL for May, 1942, p. 112, *Coastal Command.*

[21]Sir Francis Drake to the Queen, 13th April, 1588. *Calender of State Papers,* Domestic, CCIX, 89.

[22]See note 10 above.

[23]See JOURNAL for August, 1955, p. 468.

[24]See this JOURNAL for November, 1947, p. 552. *Merchant Ship Aircraft Carriers.*

[25]See this JOURNAL for August, 1954, p. 374.

VI

To sum up, research substantiates the basic correctness of Rear-Admiral Murray's statement about the difficulty experienced by the Admiralty in obtaining V.L.R. aircraft, and does not support Marshal of the Royal Air Force Sir John Slessor's counter claim that it is " a serious misstatement." It also confirms the essential correctness of Rear-Admiral Murray's statement on what enabled Admiral Horton " to take the offensive in ' the gap '." It also reveals that figures of U-boats killed unrelated (amongst other things) to figures of ships sunk and saved, are most misleading as a basis for assessing the comparative efficacy of various anti-submarine craft in preventing U-boats from achieving their sole object in war. It reveals, too, that, if the various interrelated factors must be separated, a still reliable basis is to be found in the figures of threatened ships sailed safely to their destination. Finally, the statistics of threatened ships sailed safely across the Atlantic and through the Greenland (and other) shore-based aircraft gaps show that, *so far as the U-boats were concerned*, the aircraft from escort carriers and ' macships ' with convoys, whether they sank a U-boat in the process or not, consistently provided unpalatable examples of " howe witte with small force, by bestowing strokes at a right place, and at a right time, oft times worketh wonders where exceeding great strength cannot avail."[26]

As the U-boat threat " to the strength of this nation, the shipping " is, even in this age of atomic weapons and hydrogen bombs, not one whit abated, it can, in Richard Morysine's words, " hurt no man to refresh his mind, to help his memorie, to know the time and place where hardiness prevails, for the infirmitie of man's nature is such, that wit, understanding, Memory, and Invention, with all the best qualities and ornaments of the mind, must be holpen with continuance of reading, hearing, and reasoning of matters, without which they wear rusty, they canker and decay."

[26]Morysine, R. (1539), *The Stratagemes of Warre.*

CORRESPONDENCE

(Correspondence is invited on subjects which have been dealt with in the JOURNAL, *or which are of general interest to the Services. Correspondents are requested to put their views as concisely as possible, but publication of letters will be dependent on the space available in each number of the* JOURNAL.—EDITOR.)

YE MARINERS OF ENGLAND—LORD WARDEN

To the Editor of the R.U.S.I. JOURNAL.

SIR,—On page 408 of the JOURNAL,[1] Major Hargreaves says that Harold's Navy left the seas when Duke William was trying to invade us because the crews were required on shore for harvesting, etc. On page 417, Mr. Stone says that Harold had taken his fleet to the North Sea to repel the Norsemen.

One would like to know which is correct, and how each writer came by his knowledge.

7th September, 1955. H. W. BOTHAMLEY.

SIR,—In reply to Mr. H. W. Bothamley's query: the *Saxon Chronicle* is quite clear that the large fleet assembled at Sandwich broke up on 8th September; and for the reason to which I drew attention. Harold Godwinson did not move north to confront Tostig and Harald Hadrada until towards the end of the month; passing through Tadcaster on 24th September and York on the following day. Since the fleet had ceased to exist as a unit some 12 days before Harold set out, I fail to see how any element of it could have been on hand to support the expedition against 'the last of the Vikings' and his coadjutor.

Mr. Bothamley may care to pursue the subject through the pages of the *Saxon Chronicle*, the *Roman de Rou*, and the first volume of Sir Nicholas Harris Nicolas's *History of the Royal Navy*.

REGINALD HARGREAVES,

9th September, 1955. *Major (Retd.)*.

SIR,—An anonymous writer, discussing K. M. E. Murray's *The Constitutional History of the Cinque Ports*, asserts that their ships went north with Harold although the author herself did not discuss the point.

Clowes, in his *The Royal Navy—A History*, which I have consulted since, says "there is absolutely no reason to doubt that Harold had a considerable fleet." The *Saxon Chronicle* records that in the Spring of 1066 the largest fleet and army ever seen in England were assembled at Sandwich to resist William's threatened invasion. Clowes believes no squadron of importance was detached against Tostig and Harald Hadrada, so that the weight of evidence seems against my statement.

On the other hand, on enquiring why William was not opposed, Clowes is of the opinion that the explanation in the *Saxon Chronicle* is a little vague and unsatisfactory. There is no evidence that Harold did not realize the importance of a fleet, or that he did not try to hold it together when he was in the south. The *Chronicle* says the crews refused to serve after 8th September, the Feast of the Nativity of the Virgin, and that, their provisions being gone, "no man could keep them there any longer."

The ships were sent to London, and sustained heavy losses on the voyage.

On reconsidering the matter, I think the weight of evidence is against my original statement, and I thank your reader for bringing my attention to it.

RICHARD C. STONE.

8th November, 1955.

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[1] For August, 1955.

FIRST USE OF AIR OBSERVATION OF ARTILLERY FIRE

SIR,—At the expense of my studies, I have spent some considerable time reading certain books, alas too rare in this Country, concerning the American Civil War and I may say without hesitation that one of the earlier, if not the earliest use of balloons as observing posts for artillery fire was in the ill-fated Peninsular Campaign of 1862. I regret to say that I am unable at the moment to give a direct reference. However, a study of *The Blue and the Gray* by H. S. Commager, probably the most enthralling military historical work ever written, would produce the answer. There is, however, another work, written I believe by a Mr. Dyer or Dicey, entitled *Aeronautics in the Union and Confederate Armies*, and this no doubt would clarify the matter.

I must continue riding my hobby-horse to the extent of recommending military historians to leave their studies of Frederick and Napoleon at some period in order to study the war which Cyril Falls described in his *A Hundred Years of War* as " one of the most interesting wars in history." I shall refrain from proving his statement but, if space may be allowed me, I shall enumerate the instruments which were first used effectively in this conflict. They include the magazine-loading rifle, a machine gun (Dr. Gatling, 1862), torpedoes, land and sea mines, submarines (the first to sink a ship in war-time), the first rifled field guns, armoured trains and balloons, not to mention the first effective use of ' iron-clads.'

In short, Sir, if any of your readers wish to occupy themselves with a subject which I can ruefully guarantee will take their minds off other topics, I advise them to study the events which took place on the other side of the Atlantic between 13th April, 1861, and 9th April, 1865, on which latter date there occurred probably the most dramatic and picturesque surrender ever seen in the history of war.

N. T. P. MURPHY.

10th October, 1955.

THE LURE OF THE RED COAT

SIR,—Major Letts is not quite correct[2]; the incident of the child (born to an Irish-woman named McGuire) is correct, but he has forgotten that the Light Brigade (of which Harris was a member) retreated through Orense and embarked at Vigo and *not* Corunna.

The only author I can find at the moment who makes any reference to the women in the retreat is Schaumann who, speaking of his arrival at Quitterez, says, " Few women were still to be seen, the majority lay behind somewhere between Villafranca and Lugo." Later he says, " A soldier's wife, *probably the last to have got so far*, also collapsed and died just outside Betanzos."

This statement would appear to support Colonel Cowper's original article.

F. MYATT,

13th October, 1955. *Major.*

THE CHINDIT OPERATIONS OF 1944

SIR,—I have now been attacked from two sides, first by Major Toye in your August, 1955, issue[3] for placing too low a value on the Chindit operations of 1944, and then by Brigadier Roberts in your November issue[4] for rating the results too high.

I think Major Toye overstated his case, and thus laid himself open to his share of the punishment ladled out by the Brigadier. Nevertheless, I have no doubt he is correct in claiming that the effects on the Japanese of these Chindit operations were far from confined to the disintegration of the Japanese 18th Division facing Stilwell. My reasons

[2] See JOURNAL for August, 1955, p. 465.
[3] Page 468.
[4] Pages 622–25.

for not discussing those other effects were, first, that I have had no access to Japanese reports about them and, secondly, that they were fully discussed in Appendix IV to Michael Calvert's *Prisoners of Hope*.

I do not feel I am as guilty as Brigadier Roberts believes regarding the 'background' to the Chindit operations, as described by me. I necessarily sketched-in this background very briefly, and where he refers in his letter to detailed movements and dispositions of and within divisions, I have rarely done more than refer to Corps. When I mentioned, for example, that IVth Corps in January, 1944, occupied the Imphal plain, I intended to convey that its centre of gravity lay in that area; my map made it clear, I think, that there were no Japs west of the Chindwin. The fact that I have avoided details, both of dispositions and of dates, does not, I feel, make my background inaccurate. Similarly, I regard the considerable difference in the numbers attributed by us to the Chinese Yunnan force as quite irrelevant; I took my figures, incidentally, from page 61 of Admiral Mountbatten's dispatches.

If, however, I have given the impression of belittling the operations of Fourteenth Army, either in the Arakan or in the central Assam theatre, I am very much to blame. It was never my intention to do so, nor at any stage to hint at hesitancy or lack of drive in the operations of that Army.

I agree that we must view the Chindits' performance in its right perspective, but I do not feel that in my article I made any extravagant claims regarding it. The article by Brigadier Roberts in *The Army Quarterly*, to which I referred, however, was 17 pages in length, of which about seven concerned the period January to August, 1944. The only mentions made in those pages of the Chindits' 1944 operations were, first, six lines to describe their task and, finally, another two lines about their relief by 36th Division. Of their operations and their results there was nothing. However decisive or indecisive these may have been, they were a very definite part of the Burma campaign, and fully deserve the considerable space accorded them in the Supreme Allied Commander's dispatches.

P. W. MEAD,
Lieut.-Colonel, R.A.

19th November, 1955.

SIR,—Brigadier Roberts, in his letter of 10th September, 1955, writes: "The first, and eventually only, task of the second Chindit expedition was to help General Stilwell to take Myitkyina, as is stated correctly by Lieut.-Colonel Mead." If that was so, would not the task have been greatly simplified if, instead of waiting for the overland capture of the Myitkyina airstrip by Merrill's Marauders on 17th May, it had been seized by parachute troops early in March and the Chindits flown in there?

It might be argued, firstly, that there were no available parachute troops in India Command. Yet at that time the 50th Indian Parachute Brigade was quietly jungle training in Imphal and, although it was soon to take part in the vital rearguard action at Sanjshak, it fought there in an infantry role and not in its primary one. Secondly, that there would not have been time to plan the operation. Yet one of the earliest operations studied by the Brigade, as early as the hot weather of 1942, was the capture by parachute troops of this very airstrip.

F. G. NEILD,
Major, R.A.M.C.

14th December, 1955.

SIR,—Brigadier Roberts is quite right, in his letter in the JOURNAL for November, to insist on the need for caution in assessing the Chindit effects on the Japanese until all the documents are examined. I should perhaps have said that the statements I made are based on what the Japanese C.-in-C. and his staff said to me and my colleagues at the end of the war. We felt that they were telling the truth, and, pending a full analysis, their evidence has some weight.

I am so much farther from my papers than Brigadier Roberts clearly is from his that I hesitate to join issue with him on matters of detail. My object was, however, to indicate a different viewpoint rather than to make claims for the Chindits. I am aware that their first object was not to help the Fourteenth Army. But even if their effect on the campaign as a whole was entirely incidental, I am sure that in the long run that effect will be assessed as important. The Japanese themselves certainly thought so.

On some points I can be specific :

(*a*) How could there not be uncertainty in the Japanese Army Command ? Three divisions are being launched from forward bases spread along 160 miles of river line into a mountainous jungle region, to objectives from 50 to 150 miles away. Two to three days before the launching, a force of unknown strength lands from the air immediately to the north of the base area. This is undeveloped country, thinly occupied by the Japanese, telephones are scarce : it takes some time for news to reach army headquarters. When it does the river has been crossed, it is too late to modify the main plan. So, as the Brigadier says, the three divisions went forward without any uncertainty whatever. I am less certain that calm prevailed at 15th Army headquarters. Flexibility was not their strong point.

(*b*) The diversion of air effort may be open to doubt, but we were told that an air division (5th, I think) had been diverted and that this was nearly all they had. Such a division would undoubtedly have hampered our air reinforcement of Imphal. One battalion from 213th Regiment (33rd Division) and one from 51st Regiment (15th Division) were among the first to be sent against the Chindits. 24th Independent Mixed Brigade followed almost at once, and I think a battalion of 60th Regiment (15th Division) which was late in arriving from Siam. If 53rd Division was available to be sent against the Chindits it would surely have been available *in toto* for Imphal if they had not been there.

(*c*) As to L. of C. : the Japanese did not contemplate using the northern routes except in good weather. They counted on victory—and ' Churchill rations '—by early April. Part of the reason for their failure before this time was the replenishment failure to 15th and 31st Divisions. This was partly due to what happened in their rear in March. After early April there were two factors—there was still nothing arriving by the northern routes (at least G.O.C., 31st Division, said so), there were no Churchill rations—in fact the original plan had miscarried and there was nobody to make another because the Army Commander was still in Maymyo. I agree with Brigadier Roberts that his delay was not because of any physical difficulty, but because of the northern front, which was important largely because of the Chindits. General Stilwell was a very distant threat in April.

(*d*) 28th Army—with never as much as two divisions in the Arakan battle—cannot surely be considered a true parallel with 15th Army whose three widely diverging divisions required co-ordination and command.

(*e*) Whoever did reinforce the Kohima sector, an I.N.A. regiment certainly did not. Shah Nawaz was ordered on 12th May to move part of his I.N.A. regiment from the Chin Hills to Phakekedzumi. His six half-strength companies reached Ukhul at the end of May and he himself with a small party went to within 30 miles of Kohima. But he came straight back and was swept into disaster without reinforcing anything.

In war one is nearly always in the dark, one may aim at one target and hit another even more important. The Japanese said they counted the Chindits as one of the most important single factors in their defeat. I still think they were right.

C. H. M. TOYE,
Major, R.A.

9th January, 1956.

MAX HORTON AND THE WESTERN APPROACHES

SIR,—While I have no wish to prolong an argument with a distinguished historian, I feel that I must point out that in his letter published in the August issue[5] Rear-Admiral Chalmers has repeated a statement which I do not think is quite accurate.

I quote from the letter : " Admiral Horton proposed officially that his powers should be analogous to those of Admiral Doenitz. Although this was never approved by the Government, Horton exercised these powers by general assent."

I feel that, his proposal not having been approved by the Government, Admiral Horton would have been the last officer to attempt to exercise his powers in the areas of other commanders-in-chief. Those powers never were analogous to those of Admiral Doenitz nor to those of the present Supreme Commander, North Atlantic, under N.A.T.O.

Admiral Horton commanded in that area in which by far the greatest part of the Battle of the Atlantic was fought but, so far as the principal trans-Atlantic convoys were concerned, his command ceased at ' chop,' approximately half-way between the U.K. and New York. Rear-Admiral Murray has made this very clear in his article published in the R.U.S.I. JOURNAL at the same time as my last letter.[6]

How far the Western Approaches Command extended to the south'ard I do not know, but when my support group was working in the Channel and in the Bay of Biscay during the invasion and the months immediately following ' D ' day we came, at different times, under the command of C.-in-C., Portsmouth, and C.-in-C., Plymouth, respectively. So far as I know, Admiral Horton did not, by ' general assent ' or by any other means, exercise his powers in the areas which came under these commanders-in-chief.

Certainly the training facilities at St. John's, Newfoundland, are mentioned in the book but in such a way that, I think, anyone would infer that that port was part of the Western Approaches Command. Actually it came under C.-in-C., C.N.A. If the training in any part of his command was to be mentioned I would suggest that Halifax would be a more appropriate place to cite. There the facilities for training were infinitely greater than those at St. John's and greater even, I believe, than those at any *single* port in the Western Approaches Command.

With regard to the passage on page 157, may I quote from the book. "' Keep 'em well stirred up,' said Prentice. Although these tactics were prompted by the offensive spirit and met with some success, experience showed that it does not always pay to stir up trouble without the strength to cope with it."

Actually, as I tried to explain in my last letter, those particular tactics were defensive, the object being to keep the convoy out of trouble when the escort was too small to deal adequately with a pack attack. Apparently the idea did pay for a short time since the convoys with which it was employed were not attacked. I feel that the quotation hardly gives an accurate impression of either the object or result.

Max Horton and the Western Approaches gives such an excellent picture of so much of the Battle of the Atlantic that it might well become a text book for future historians. I would only suggest that the alteration or addition of a few sentences would correct any of those impressions which a reader might get from it which are not entirely in accordance with the historical facts.

J. D. PRENTICE,
Captain, R.C.N. (Retd.).

December, 1955.

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[5] Pages 465–66.
[6] See JOURNAL for May, 1955, p. 280 and pp. 291–92.

TO ARM OR NOT TO ARM?

SIR,—In his article entitled *To Arm or not to Arm?* in the November JOURNAL,[7] Commander Sharman has presented a strong case against the arming of merchant ships in war-time, but I cannot let his conclusions on this important question pass without a few observations in defence of arming merchant ships.

Commander Sharman stated that " . . . the most effective defence of merchant shipping is obtained by the exercise of naval control of shipping in the form of *sailing ships in convoys* adequately protected by escorts," but are we to assume that in a war in which the H-bomb may be used, the operation of a convoy system as we knew it in the last two wars will continue to be our future policy? It may well be that in any future war our merchant ships may have to depend more than ever before on their own defensive equipment, and just as the Royal Navy is developing modern techniques of detection and attack by highly skilled personnel using up-to-date devices and weapons, so these principles must be applied to our merchant ships.

It is quite true, as Commander Sharman states, that " it is open to question whether fitting merchant ships with guns is the most practical or desirable method," but is he not placing too great an emphasis on ' guns ' as a method of defence? And surely is he not wrong in stating that " the type of armament one envisages being fitted to merchant ships . . . will be of doubtful use or ornament "? It is on this last statement that all his arguments fall down, and I would submit that the principle which has been applied throughout our long maritime history—and recognized by international law—that a merchant ship is entitled to use force to resist capture on the high seas, must remain a fundamental principle of our future policy for the defence of merchant shipping.

The question of morale is of immense importance and I would suggest that Commander Sharman has greatly under-estimated the effect which the fitting of guns in merchant ships had on our Merchant Navy personnel during the last war. Quite apart from their effect as a deterrent—especially from submarine and air attacks—the effect on morale was high, and it is my belief that the fitting of alternative defensive weapons in a future conflict will be equally effective.

Finally, a word about the Merchant Navy Defence Courses. The object of these courses is not to train men " in the use of obsolete weapons," but (*a*) to let personnel of the Merchant Navy see how the Royal Navy intends to protect it in war and (*b*) to instruct the Merchant Navy how it can, to some extent, help itself. On this latter point, damage control (including the effect of damage on the ship's stability), passive defence, and fire-fighting have formed a major part of the training since the post-war Merchant Navy Defence Courses were re-introduced in 1950.

W. R. SYMON,
Commander, R.N.R.

29th December, 1955.

[7] Page 579.

GENERAL SERVICE NOTES

NORTH ATLANTIC TREATY ORGANIZATION

COMMANDER-IN-CHIEF, ALLIED FORCES, NORTHERN EUROPE.—Lieut.-General Sir Cecil Sugden has been appointed Commander-in-Chief, Allied Forces, Northern Europe, in succession to General Sir Robert Mansergh.

COMMANDER, ALLIED AIR FORCES, CENTRAL EUROPE.—Air Chief Marshal Sir George Mills assumed command of Allied Air Forces, Central Europe, on 4th January, in succession to Air Chief Marshal Sir Basil Embry.

AIR C.-in-C., CHANNEL AND EASTERN ATLANTIC COMMANDS.—Air Marshal Sir Bryan Reynolds has been appointed Allied Maritime Air C.-in-C., Channel Command, and Air C.-in-C., Eastern Atlantic Area (in addition to his appointment as A.O.C.-in-C., R.A.F. Coastal Command).

COMMANDANT, N.A.T.O. DEFENCE COLLEGE.—Lieut.-General Clovis E. Byers, U.S. Army, succeeded Air Marshal L. Darvall as Commandant, N.A.T.O. Defence College, on 15th November, 1955.

CHANGE IN AIR DEFENCES.—On 15th December, the North Atlantic Council gave General Alfred M. Gruenther, Supreme Allied Commander, Europe, co-ordinating authority over all air defences of western Europe. Air Defence will be divided into four regions: north, centred on Oslo; central, Fontainebleau; southern, Naples; and the United Kingdom; all of which will be co-ordinated, but not commanded, by the Supreme Commander.

A new system of communications not susceptible to jamming, almost 100 per cent. reliable, and requiring only 250 men for its operation in the whole of western Europe is to be used for all vital circuits.

NEW TACTICAL AIR FORCE.—A new tactical air force came into operation at Vicenza, Italy, on 1st January. It will be under the command of Allied Air Forces, Southern Europe, and will include American, French, Greek, Italian, and Turkish personnel.

EXERCISE "CORDON BLEU."—About 100,000 United States and French troops were engaged in this exercise in south Germany during October, the N.A.T.O. commands involved being Central Army Group and 4th Tactical Air Force. One object of the exercise was to improve the techniques and procedures for the use of the newly developed U.S. atomic weapons. A second was to improve the co-ordination of N.A.T.O. forces of different types and nationalities, and of air and ground operations. A third was to devise and test an inter-Allied umpire system. The essential object, however, was to develop the technique and co-ordination of the counter-attack. A contingent of 600 officers and men from the British 16th Independent Parachute Brigade, which had flown from England to take part in the exercise, should have made a parachute drop, but owing to mist the drop had to be cancelled and the contingent was conveyed by road to its allotted position. A French light mechanized division, a new type of formation designed for penetration in depth, also took part.

EXERCISE "SILVER RIVER."—This exercise, which had for its theme the invasion of Thrace by an enemy with a simultaneous landing in the Izmir peninsula on the Asian side, and the measures taken by defending forces to stave off these attacks, lasted for several days early in October. Admiral Fechteler, representing N.A.T.O., was present during the exercise.

LAND FOR PERMANENT HEADQUARTERS.—Land near the Bois de Boulogne has been taken over formally by N.A.T.O. on which its new permanent headquarters is to be erected. It will be leased from the French Government at a nominal rent. The building will take about two years to complete.

BAGHDAD PACT

First Meeting of Baghdad Pact Council

The chief representatives of the five member countries who attended the first meeting of the Council of the Baghdad Pact held in Baghdad on 21st–22nd November under the chairmanship of the Prime Minister of Iraq were as follows :—

Great Britain.—Mr. Harold Macmillan, the Foreign Secretary, and General Sir Gerald Templer, Chief of the Imperial General Staff. Iraq.—Nuri es-Said, the Prime Minister, and Major-General Rafiq Arif, Chief of the General Staff. Pakistan.—Choudri Mohammad Ali, the Prime Minister and Minister of Defence, and General Mohammed Ayub Khan, C.-in-C. of the armed forces. Persia.—M. Hussein Ala, the Prime Minister, and General Hidayat, Chief of the General Staff. Turkey.—M. Adnan Menderes, the Prime Minister, and General Tunaboylu, Chief of the General Staff.

The U.S. Ambassador to Iraq, Mr. Waldemar J. Gallman, and the C.-in-C., U.S. Forces in the Eastern Atlantic and Mediterranean, Admiral John Cassidy, attended the meeting as political and military observers respectively.

The Council issued a communiqué after the meeting, the following paragraphs being of particular interest :—

(3) The Government of Iraq emphasizes that the responsibilities of Iraq under the Pact and as a member of the Council are in full accord with her obligation under the Treaty of Joint Defence and Economic Co-operation between the Arab League States.

(7) The five Governments set up a permanent Council as provided for in Article 6 of the Pact. The Council will be deemed to be in continuous session. Ministerial meeting will take place at least once a year. Iraq, as host country, will provide the first chairman until the end of 1956, and the chairmanship will be held thereafter in alphabetical order of the other Powers for a period of one year. If, however, additional meetings were to be held elsewhere than in the capital of the regular chairman, the host country will be asked to provide the chairman for that meeting.

(8) The permanent seat of the organization and its dependent bodies shall be in Baghdad.

(9) Each Government will appoint a deputy representative to the Council with ambassadorial rank.

(10) The Council, through their permanent deputies in Baghdad, should meet at any time to discuss any matters of political, economic, and military interest to the five Governments.

(12) The Council established a permanent Military Committee, responsible and subordinate to the Council and charged with carrying out such directives as may be entrusted to it. The representatives of the five Governments on the Military Committee will be their Chiefs of Staff or their deputies.

(13) The Military Committee at its first meetings laid the foundations of a military organization to ensure the security of the region. . . .

(14) The Council took note with appreciation of the generous and valuable help extended to each of them by the U.S. Government in the form of free aid in the provision of arms and other military equipment to enable them to strengthen their defence against aggression. . . .

(15) An Economic Committee was set up to develop and strengthen the economic and financial resources of the region. . . .

(19) The Council decided to meet again in special session in Teheran during April, 1956. They directed the Military Committee and the Economic Committee to report progress at that session.

GREAT BRITAIN

Minister of Defence

In the reorganization of the Government which was announced on 20th December, Sir Walter Monckton was appointed Minister of Defence, in succession to Mr. Selwyn Lloyd, who became Foreign Secretary.

Independent Chairman, Chiefs of Staff Committee

It was announced on 25th October that Marshal of the Royal Air Force Sir William Dickson had been appointed independent Chairman of the Chiefs of Staff Committee with effect from 1st January, 1956.

Services Reduction of 100,000

It was announced by the Prime Minister, Sir Anthony Eden, on 8th October, that the armed forces would be cut by about 20,000 within six months, and by about 40,000 in each of the next two financial years, making a total reduction of 100,000 men by April, 1958. The reductions will be made initially at least by raising the age at which men are called up. Reductions have already begun, as there were only three registrations of men for National Service in March, July, and November, 1955, instead of the usual four. By April, 1956, the call up age will have risen to 18 years, five months. By 1958, the age will be about 19 if all the reductions are made in the same way.

Education Allowances for Officers and Other Ranks

It was announced by Mr. Selwyn Lloyd, Minister of Defence, in the House of Commons on 2nd November that the Government had decided to inaugurate as from 1st September, 1955, a system of education allowances for officers and other ranks.

Officers and other ranks serving overseas, and those serving at home who were subject to frequent posting, would receive an allowance of £75 a year for each child between the ages of 11 and 18 at a boarding school, and £25 for each child between the ages of 11 and 18 lodged with parents or guardians in order to ensure continuity in day school education. For officers and other ranks serving overseas the allowance would not be subject to income tax.

Imperial Defence College

The following were selected to attend the 1956 course which started in January :—

Royal Navy.—Captain E. A. Blundell, O.B.E.; Captain A. J. Cawthra, A.M.I.Mech.E.; Captain J. H. Crawford, D.S.C.; Captain R. E. N. Kearney, O.B.E.; Captain H. S. Mackenzie, D.S.O., D.S.C.; Captain E. V. St. J. Morgan, D.S.C.; Captain R. A. J. Owen; Captain G. D. Pound, D.S.C.; Captain J. P. Scatchard, D.S.C.; Captain R. A. Villiers, C.B.E.

Army.—Brigadier D. H. Fitzgerald, D.S.O., O.B.E.; Brigadier L. C. C. Harrison, M.C.; Brigadier R. W. Hobson, O.B.E.; Brigadier A. Jolly, D.S.O., O.B.E.; Brigadier D. E. B. Talbot, D.S.O., M.C.; Brigadier T. E. Williams, C.B.E.; Colonel R. G. V. FitzGeorge-Balfour, C.B.E., D.S.O., M.C.; Colonel G. D. R. FitzPatrick, D.S.O., M.B.E., M.C.; Colonel D. E. Holbrook, O.B.E.; Colonel J. E. L. Morris, D.S.O., O.B.E.

Royal Air Force.—Air Commodore S. C. Elworthy, C.B.E., D.S.O., M.V.O., D.F.C., A.F.C.; Air Commodore D. R. Evans, C.B., C.B.E., D.F.C.; Air Commodore D. M. T. Macdonald, C.B.; Air Commodore T. U. C. Shirley, C.B.E., M.I.E.E., A.F.R.Ae.S.; Group Captain E. L. Colbeck-Welch, O.B.E., D.F.C.; Group Captain P. D. Holder, D.S.O., D.F.C.; Group Captain L. A. Jackson, C.B.E.; Group Captain E. G. Jones, D.S.O., O.B.E., D.F.C.; Group Captain J. D. Melvin, O.B.E.; Group Captain T. O. Prickett, D.S.O., D.F.C.

Canada.—Captain J. C. Littler, R.C.N.; Brigadier W. A. B. Anderson, O.B.E., C.D.; Colonel W. S. Murdoch, O.B.E., E.D.; Air Commodore A. C. Ripley, O.B.E., C.D.; Superintendent L. Bingham, Royal Canadian Mounted Police.

AUSTRALIA.—Captain O. H. Becher, D.S.O., D.S.C., R.A.N.; Captain (S) P. Perry, O.B.E., R.A.N.; Brigadier T. J. Daly, C.B.E., D.S.O.; Brigadier J. W. Harrison, O.B.E.; Air Commodore F. Headlam, O.B.E.; Mr. W. Callaghan, Department of Trade and Customs.

NEW ZEALAND.—Group Captain T. F. Gill, D.S.O., R.N.Z.A.F.

SOUTH AFRICA.—Colonel R. F. Armstrong, South African Staff Corps (Air).

PAKISTAN.—Major-General Mohammad Musa, M.B.E.; Air Commodore M. Rabb; Mr. A. A. Shah, Civil Service.

INDIA.—Major-General P. N. Thapar; Major-General K. P. Dhargalkar; Air Commodore D. A. R. Nanda.

FEDERATION OF RHODESIA AND NYASALAND.—Brigadier R. E. B. Long, C.B.E., Rhodesia and Nyasaland Staff Corps.

CIVIL SERVICE (FOREIGN SERVICE).—Mr. T. E. Bromley; Mr. M. G. L. Joy.

CIVIL SERVICE (COLONIAL SERVICE).—Mr. A. L. Adu, Gold Coast.

HOME CIVIL SERVICE (ADMINISTRATORS).—Mr. C. H. O'D. Alexander, Government Communications H.Q.; Mr. J. H. Francis, Air Ministry; Mr. G. P. Hampshire, Commonwealth Relations Office; Mr. C. P. Scott-Malden, Ministry of Transport and Civil Aviation; Mr. M. D. Tennant, Ministry of Labour and National Service; Mr. C. J. A. Whitehouse, Board of Trade.

HOME CIVIL SERVICE (SCIENTIST).—Mr. L. F. Nicholson, Ministry of Supply.

UNITED STATES.—Captain Louis Joseph Kirn, U.S.N.; Colonel Frederick J. Cooke, U.S. Army; Colonel Stanton T. Smith, U.S.A.F.; Mr. Robert J. G. McClurkin, U.S. State Department.

EMPLOYMENT OF RETIRED SENIOR OFFICERS IN INDUSTRY

The Federation of British Industries has published a leaflet describing a scheme for the introduction to industry of retired senior officers of the armed Services and the Colonial Service.

The Federation has set up an advisory council to exercise general oversight of all aspects of this scheme, and on it are represented the Officers' Association, the Colonial Office, the Polytechnic, the Administrative Staff College, and the Ministry of Labour. A series of five-week industrial appreciation courses has been arranged by the Polytechnic, and retired officers with the rank of colonel or its equivalent, or higher, wishing to take the course may be interviewed by a selection panel set up by the Federation.

The leaflet is obtainable from the Federation, 21, Tothill Street, London, S.W.1, price 3d., post free.

V.C. CENTENARY

The Victoria Cross was instituted by Royal Warrant on 29th January, 1856, and celebrations to commemorate the centenary will take place in London in June. H.M. The Queen has graciously consented to review holders of the V.C. in Hyde Park on 26th June. All surviving holders of the Victoria Cross have been invited to these ceremonies.

CIVIL DEFENCE

REGIONAL DIRECTORS.—The following officers have been appointed to the new United Kingdom Home Office posts of Regional Director of Civil Defence in the 10 Civil Defence regions in England and to the post of Director of Civil Defence in Wales. These officers assumed their official responsibilities towards the end of October, 1955.

Northern Region (Newcastle-on-Tyne), Major-General S. Lamplugh, C.B., C.B.E.; North-Eastern Region (Leeds), Mr. J. R. S. Watson; North Midland Region (Nottingham), Rear-Admiral A. D. Torless, C.B., D.S.O.; Eastern Region (Cambridge), Lieut.-General Sir Ernest Wood, K.B.E., C.B., C.I.E., M.C.; Southern Region (Reading), Rear-Admiral W. L. G. Adams, C.B., O.B.E.; South-Western Region (Bristol), Major-General J. S.

Lethbridge, C.B., C.B.E., M.C.; Midland Region (Birmingham), Air Marshal Sir Lawrence Pendred, K.B.E., C.B., D.F.C.; North Western Region (Manchester), Lieut.-General E. N. Goddard, C.B., C.I.E., C.B.E., M.V.O., M.C.; South-Eastern Region (Tunbridge Wells), Lieut.-General Sir Alexander Cameron, K.B.E., C.B., M.C.; London Region, Captain K. L. Harkness, D.S.C., R.N. (Retd.); Wales Office (Cardiff), Major-General F. R. G. Matthews, C.B., D.S.O.

HELICOPTERS.—Arrangements have been made for a helicopter to be made available for Civil Defence purposes, in order to carry out experiments and trials to determine how it can best be used for reconnaissance and how the observers should be trained.

It is intended eventually to establish in each Civil Defence region a small trained body of observers to make radio reports from the air to the ground for the benefit of all the Civil Defence services.

In order to carry out experiments and trials, the helicopter is visiting each region for a short period, flights being arranged for officers of two categories:—

(*a*) Controllers-designate, chief police and fire officers, and certain other senior officers to enable them to experience the quality of observation that can be obtained from a helicopter and to give their views on the ways in which helicopters might be used.

(*b*) Members of the Headquarters Section of the Civil Defence Corps and junior police and fire service officers who volunteer and are selected to assist in more detailed training experiments.

An instructor is accompanying the machine on its visits to regions to conduct the flights and assist in carrying out the training experiments.

In addition to the programme described above, the Home Office is undertaking, with the co-operation of various other bodies, experiments and tests with the helicopter in the following matters: measurement of radio-activity; use of loud-hailing equipment; traffic and crowd control; and load carrying.

COMBINED DEFENCE CONTROL CENTRE, BIRMINGHAM.—The first fully combined defence control centre in Britain, to provide headquarters for all the services—police, fire, ambulance, and Civil Defence—in the event of an atomic bomb attack, was opened in Birmingham by General Sir Sidney Kirkman, Director-General of Civil Defence, on 26th November.

DOMINIONS AND COLONIES

AUSTRALIA

DEFENCE BUDGET, 1955–56.—Provision for expenditure of £A190,000,000 on defence for the financial year 1955–56 was proposed in the Budget introduced by the Treasurer, Sir Arthur Fadden, in the House of Representatives in September.

This provided for £A48,834,000 for the Navy, £A63,128,000 for the Army, and £A50,926,000 for the Air Force. The Civil Defence estimate was £A234,000, and an allocation of £A14,134,000 to the Department of Supply included £A9,910,000 for research and development, items concerned largely with the Australian contribution to the guided weapons project at Woomera and Salisbury in South Australia.

The Minister for Defence, Sir Philip McBride, in replying to Opposition criticism in the course of the debate on the defence estimates, quoted the following figures concerning the equipment of Australian fighting Services:—

Navy.—One aircraft carrier and another, the most modern of its type in existence, nearing completion; one training ship; four destroyers; seven frigates; six ocean-going minesweepers and auxiliary craft; a substantial reserve fleet maintained in good condition ready for an emergency; 147 fleet aircraft delivered since June, 1950, which would shortly be replaced by the latest Sea Venom and Gannet aircraft.

Army.—More than 100 Centurion tanks, 130 other armoured fighting vehicles, and 2,700 mechanical transport vehicles added since June, 1950; orders placed for £A21,000,000 worth of high priority equipment; and £A8,000,000 paid into the defence equipment trust account.

Air Force.—Three hundred aircraft delivered to the R.A.A.F. since June, 1950. Canberra jet bombers, Avon Sabre jet fighters, and Vampire jet trainers were in production and Meteor and Neptune aircraft had been obtained from overseas. Production of a training aircraft had also begun.

The Minister said also that Australia had expended £A44,000,000 on the long-range weapon establishment at Woomera, £A33,000,000 of that amount having been spent since 1950.

Minister for the Army and Navy.—Mr. J. Francis, who has been Minister for the Army and Navy since December, 1949, has been appointed Australian Consul-General in New York. His ministerial posts have been taken over by Sir Eric Harrison.

RHODESIA AND NYASALAND

National Service

On 3rd October, full-time National Service training began for young men of the Federation of Rhodesia and Nyasaland at Llewellin Barracks, near Bulawayo. Trainees will do 137 days' training before being drafted to Territorial Force units within the Federation for three years' compulsory part-time service.

Men between the ages of 18 and 22 years are liable to be called up, and it is hoped to train annually 1,600 Europeans and 320 Coloureds, Eurafricans, and Asians in eight separate intakes. Groups of trainees will report to the barracks at six-weekly intervals. The initial training will aim at fitting trainees for service in Territorial Force units which may be called out for the maintenance of law and order. During their period of part-time service, men living in cities and towns will be required to complete 40 hours' training and attend a two-week camp each year. Those living in country districts will be required to attend one three-week camp each year. Africans are not included in the scheme for compulsory National Service training.

COCOS ISLANDS

Formal Transfer to Australia

The Cocos Islands were formally transferred to Australia on 3rd November after the enactment of the necessary legislation by the United Kingdom and Australian Parliaments. During the Bill's passage through the Australian Parliament, Mr. Hasluck, Minister for Territories, stated that the rights of the Clunies-Ross family, the traditional rulers of the Islands, would remain unaltered; that Singapore laws in force at the time of the transfer would be continued; and that the Malay institutions, customs, and usages of the Islands would be preserved.

FOREIGN

BULGARIA

Reduction in Military Service Periods

On 9th November, it was announced in Sofia that the Government had decided to reduce the period of military service from 1st May, 1956, from three to two years in the case of men serving in the Army and Air Force: and from four to three years for men serving in the Navy and anti-aircraft units.

FRANCE

New Commanders in Morocco and Tunisia

It was announced in Paris on 4th October that Major-General Baillif had been appointed Commander of the armed forces in Tunisia, and on 15th November it was announced that General Bourgund had been appointed Supreme Commander of the armed forces in Morocco.

RUMANIA

Reduction of Military Service Periods

On 27th November, it was officially announced in Bucharest that the Rumanian Government had decided to reduce the period of military service from 1st December as follows :—conscripts in the Army from three to two years, those in the Navy from four to two years. The period of service in the Air Force, anti-aircraft formations, and frontier guards remains unchanged at three years.

UNITED STATES

Foreign Aid, 1948–55

A report of the Foreign Operations Administration shows that in the seven years from the start of the Marshall Plan on 3rd April, 1948, to 31st March, 1955, the U.S. had made allotments of foreign aid totalling $19,444,737,000: made up of $14,516,049,000 to Europe; $2,386,453,000 to the Far East; $2,246,140,000 to the Near East, Africa, and South Asia; $100,613,000 to Latin America; and $195,482,000 for a number of non-regional programmes. The United Kingdom share amounted to $3,800,019,000.

NAVY NOTES

GREAT BRITAIN

H.M. The Queen

Trafalgar Anniversary.—On the 150th anniversary of the battle of Trafalgar on 21st October, The Queen and the Duke of Edinburgh dined with the Lords Commissioners of the Admiralty at a special Trafalgar Day Dinner held in the Painted Hall of the Royal Naval College, Greenwich. In the afternoon, the Duke of Edinburgh attended the traditional service in Trafalgar Square. Appropriate marks of respect were paid throughout the Navy. By direction of Her Majesty, " Splice the Mainbrace " was signalled to H.M. ships and establishments.

Merchant Navy Memorial.—On 5th November, The Queen unveiled on Tower Hill a Memorial to 24,000 men and women of the Merchant Navy, the Fishing Fleets, and the Lighthouse and Pilotage Services who gave their lives in the 1939–45 War and have no grave but the sea. The text of Her Majesty's speech was published in *The London Gazette* on 8th November.

Aides-de-Camp.—The following officers have been appointed Naval Aides-de-Camp to The Queen :—

Captain Colin Gatey, C.B.E., in place of Captain H. G. C. Butler (5th December, 1955).

Instructor Captain H. S. Gracie, in place of Instructor Captain F. C. Sobey (15th June, 1955).

Captain J. J. Youngs, O.B.E., D.S.C., R.D., R.N.R., as Royal Naval Reserve Aide-de-Camp, in place of Captain R. E. Cowell, R.D., R.N.R. (9th December, 1955).

Captain W. Lambert, V.R.D., D.L., R.N.V.R., as Royal Naval Volunteer Reserve Aide-de-Camp, in place of Commodore F. T. Pollinger, V.R.D., D.L., R.N.V.R.

Brigadier R. W. Madoc, O.B.E., R.M., as Royal Marine Aide-de-Camp, in place of Colonel R. W. B. Simonds, C.B.E. (31st October, 1955).

Taranto Anniversary.—The Duke of Edinburgh was the principal guest at a dinner at H.M.S. *Daedalus*, headquarters of the Fleet Air Arm at Lee-on-Solent, to mark the 15th anniversary of the battle of Taranto on 11th November.

Nursing Service.—Princess Alexandra of Kent has kindly consented to become Patron of the Queen Alexandra's Royal Naval Nursing Service. The announcement appeared in *The London Gazette* of 16th December. The First Lord of the Admiralty sent a message to the Princess expressing the pleasure of the nursing officers of the Service and welcoming her as their Patron.

Board of Admiralty

Patent.—The Queen has been pleased by Letters Patent under the Great Seal bearing date the 22nd day of December, 1955, to appoint the following as Commissioners for Executing the Office of Lord High Admiral :—

The Rt. Hon. J. P. L. Thomas.

Admiral the Rt. Hon. Louis F. A. V. N. Earl Mountbatten of Burma, K.G., G.C.B., G.C.S.I., G.C.I.E., G.C.V.O., D.S.O.

Admiral Sir Charles E. Lambe, K.C.B., C.V.O.

Admiral Sir Ralph A. B. Edwards, K.C.B., C.B.E.

Rear-Admiral R. D. Watson, C.B.E.

Rear-Admiral A. N. C. Bingley, O.B.E.

Vice-Admiral W. W. Davis, C.B., D.S.O.

Vice-Admiral E. G. A. Clifford, C.B., C.B.E.

The Hon. George R. Ward.

Kenelm S. D. Wingfield Digby, Esq.

Sir John G. Lang, G.C.B.

NEW PARLIAMENTARY SECRETARY.—In a list of changes among members of the Government announced in the Press on 21st December, Commander A. H. P. Noble was appointed Under-Secretary for Commonwealth Relations, and was succeeded as Parliamentary and Financial Secretary, Admiralty, by the Hon. George R. Ward. At the same time it was announced that the First Lord, Mr. J. P. L. Thomas, would be created a Viscount.

HONOURS AND AWARDS

The following were included in the New Year Honours List :—

K.C.B.—Vice-Admiral William W. Davis, C.B., D.S.O. ; Vice-Admiral Maurice H. Elliott, C.B., C.B.E.

C.B.—Rear-Admiral A. N. C. Bingley, O.B.E. ; Rear-Admiral W. G. Brittain, C.B.E. ; Rear-Admiral H. P. Currey, O.B.E. ; Rear-Admiral N. E. Dalton, O.B.E. ; Instructor Captain H. S. Gracie, A.D.C. ; Surgeon Rear-Admiral R. C. May, O.B.E., M.C., Q.H.S. ; Major-General J. L. Moulton, D.S.O., O.B.E., R.M. ; Rear-Admiral A. R. Pedder ; Rear-Admiral G. B. Sayer, D.S.C. ; Rear-Admiral P. Skelton.

K.B.E.—Vice-Admiral Charles F. W. Norris, C.B., D.S.O. ; Rear-Admiral Leopold E. Rebbeck, C.B. (Retd.)

ALBERT MEDAL.—The Queen has approved the posthumous award of the Albert Medal for gallantry in saving life at sea to Temporary Surgeon Lieutenant Charles Eric Rhodes, R.N.V.R., who lost his life after the explosion in the submarine *Sidon* in Portland Harbour on 16th June, 1955.

FLAG APPOINTMENTS

B.J.S.M., WASHINGTON.—The Ministry of Defence announced on 25th October that Admiral Sir Michael Denny, G.C.B., C.B.E., D.S.O., then Commander-in-Chief, Home Fleet, is to be Chairman of the British Joint Services Mission, Washington, and United Kingdom representative on the Standing Group of the Military Committee of N.A.T.O., in succession to General Sir John Whiteley, K.C.B., C.B.E., M.C., the appointment to take effect in June, 1956.

SOUTH ATLANTIC.—Vice-Admiral W. G. A. Robson, C.B., D.S.O., D.S.C., to be Commander-in-Chief, South Atlantic, in succession to Vice-Admiral Sir Ian M. R. Campbell, K.B.E., C.B., D.S.O. (May, 1956).

SCOTLAND.—Vice-Admiral J. W. Cuthbert, C.B., C.B.E., to be Flag Officer, Scotland, in succession to Vice-Admiral W. G. A. Robson, C.B., D.S.O., D.S.C. (1st March, 1956).

FAR EAST.—Rear-Admiral L. F. Durnford-Slater, C.B., to be Flag Officer Commanding Fifth Cruiser Squadron and Flag Officer Second-in-Command, Far East Station, in succession to Vice-Admiral R. F. Elkins, C.B., C.V.O., O.B.E. (May, 1956).

AIRCRAFT CARRIERS.—Rear-Admiral M. L. Power, C.B., C.B.E., D.S.O., to be Flag Officer, Aircraft Carriers, in succession to Rear-Admiral A. R. Pedder, C.B. (about April, 1956).

NAVAL RESERVES.—Rear-Admiral G. Thistleton-Smith, G.M., to be Admiral Commanding Reserves, in succession to Vice-Admiral J. W. Cuthbert, C.B., C.B.E. (January, 1956).

TRAINING SQUADRON.—Rear-Admiral W. K. Edden, O.B.E., to be Flag Officer, Home Fleet Training Squadron, in succession to Rear-Admiral H. W. Biggs, C.B., D.S.O. (April, 1956).

GIBRALTAR.—Rear-Admiral R. S. Foster-Brown to be Flag Officer, Gibraltar, and Admiral Superintendent, H.M. Dockyard, Gibraltar, in succession to Rear-Admiral H. P. Currey, C.B,. O.B.E. (April, 1956).

DEPUTY E.-in-C.—Captain G. A. M. Wilson to be promoted Rear-Admiral with effect from 12th December, 1955, and appointed Deputy Engineer-in-Chief, in succession to Rear-Admiral R. W. Parker, C.B.E.

MEDICAL DIRECTOR GENERAL.—Surgeon Rear-Admiral R. C. May, C.B., O.B.E., M.C., Q.H.S., to be promoted Surgeon Vice-Admiral and to be Medical Director General of the Navy, in succession to Surgeon Vice-Admiral Sir Alexander Ingleby-Mackenzie, K.B.E., C.B., Q.H.P. (30th April, 1956).

DEPUTY M.D.G.—Surgeon Captain R. L. G. Proctor to be promoted Surgeon Rear-Admiral with effect from 14th November, 1955, and appointed Deputy Medical Director General, in succession to Surgeon Rear-Admiral S. G. Rainsford from 30th November, 1955.

MALTA HOSPITAL.—Surgeon Captain S. G. Weldon, C.B.E., to be promoted Surgeon Rear-Admiral and appointed Medical Officer-in-Charge, R.N. Hospital, Malta, to succeed Surgeon Rear-Admiral R. C. May, C.B., O.B.E., M.C., Q.H.S., with effect from 16th January, 1956, and as Command Medical Officer on the staff of the Commander-in-Chief, Mediterranean, and Medical Adviser to the Commander-in-Chief, Allied Forces, Mediterranean.

R.F.A. COMMODORE.—On 11th December Captain T. H. Card, O.B.E., Master of the R.F.A. *Tidereach*, a new tanker, hoisted his broad pendant in the ship as Commodore of the Royal Fleet Auxiliary Service, in succession to Commodore W. B. Browne, O.B.E., of the R.F.A. *Fort Beauharnois*.

RETIREMENTS AND PROMOTIONS

The following changes on the Flag List were announced to date 1st December, 1955 :—

Admiral Sir Geoffrey N. Oliver, G.B.E., K.C.B., D.S.O., placed on the Retired List.

Vice-Admiral Sir John A. S. Eccles, K.C.B., K.C.V.O., C.B.E., promoted to Admiral in H.M. Fleet.

Rear-Admiral R. G. Onslow, C.B., D.S.O., promoted Vice-Admiral in H.M. Fleet.

Vice-Admiral Sir Edward M. Evans-Lombe, K.C.B., was placed on the Retired List to date 19th September, 1955.

Rear-Admiral R. W. Parker, C.B.E., was placed on the Retired List to date 19th December, 1955.

Surgeon Rear-Admiral S. G. Rainsford, C.B., was placed on the Retired List to date 28th December, 1955.

The following were recorded in *The London Gazette* on 2nd December :—

Captains to be Rear-Admirals.—J. P. W. Furse, O.B.E. (19th September) ; G. O. Naish, D.S.C. (29th August) ; G. A. M. Wilson (12th December).

Surgeon Captain to be Surgeon Rear-Admiral.—R. L. G. Proctor (14th November).

HALF-YEARLY LISTS

The following promotions and retirements were announced by the Admiralty to date 7th January, 1956 :—

To be promoted to Rear-Admiral in H.M. Fleet :—

Captain (Acting Rear-Admiral) G. A. Thring, D.S.O. ; Captain R. S. Wellby, D.S.O., A.D.C. ; Captain P. Dawnay, M.V.O., D.S.C. ; Captain (Commodore Second Class)

R. H. Wright, D.S.C.; Captain A. C. C. Miers, V.C., D.S.O.; Captain (Commodore Second Class) C. L. G. Evans, C.B.E., D.S.O., D.S.C.

To be placed on the Retired List in the rank of Captain :—

Captain A. C. G. Ermen, A.D.C.; Captain E. H. Thomas, D.S.C., A.D.C.; Captain (Commodore Second Class) P. L. Collard, A. D. C.; Captain J. D. Shaw-Hamilton, A.D.C.; Captain (Commodore First Class) A. H. Thorold, O.B.E., D.S.C., A.D.C.; Captain S. J. S. Boord, A.D.C.; Captain J. E. Slaughter, D.S.O., A.D.C.; Captain G. T. Coney, O.B.E.; Captain J. F. Whitfield, D.S.C.; Captain D. H. Connell-Fuller; Captain W. F. H. C. Rutherford, C.B.E., D.S.O.

The following promotions have been made to date 31st December, 1955 :—

Commander to Captain.—P. G. C. Dickens, D.S.O., M.B.E., D.S.C.; C. K. S. Aylwin; A. W. F. Sutton, D.S.C.; J. G. T. Western; D. F. Chilton, D.S.C.; R. H. Connell, D.S.C.; A. S. Whitworth, D.S.C.; J. R. G. Trechman; W. W. Muir; G. H. Carew-Hunt; C. A. James; A. M. Lewis; H. T. Harrel; P. B. Marriott, D.S.O., D.S.C.; R. White, O.B.E.; P. M. Compston; F. Stovin-Bradford, D.S.C.; H. J. Lee, D.S.C.

Engineering Branch—Commander to Captain.—J. E. P. Smeall; G. W. Tanner; A. J. Cawthra; H. G. H. Tracy, D.S.C.; D. P. Sparham, O.B.E.

Electrical Branch—Commander to Captain.—L. Hix, B.Sc.; F. L. Millns, D.S.C.

Instructor Branch—Instructor Commander to Instructor Captain.—E. F. Byng, D.I.C. (Acting Captain); E. T. W. Smyth, M.A. (Acting Captain).

Medical Branch—Surgeon Commander to Surgeon Captain.—W. J. F. Guild; D. D. Steele-Perkins, C.V.O.; G. H. G. Southwell-Sander (Acting Surgeon Captain).

Dental Branch—Surgeon Commander (D) to Surgeon Captain (D).—P. S. Turner (Acting Surgeon Captain (D)); W. L. Mountain, O.B.E.

Supply and Secretariat Branch—Commander to Captain.—F. V. Harrison; A. Woodifield, M.V.O.; H. C. Lyddon, O.B.E.

Exercises and Cruises

Visit to Leningrad.—Concurrently with the visit of a Russian squadron to Portsmouth (see under " Russia "), a British squadron under the command of Admiral Sir Michael Denny, Commander-in-Chief, Home Fleet, visited Leningrad between 12th and 17th October. Admiral Denny flew his flag in the light fleet carrier *Triumph*, and the other ships were the fast minelayer *Apollo;* two " Daring " class ships, the *Decoy* and *Diana;* and two destroyers, the *Chevron* and *Chieftain.* H.M.S. *Triumph* returned to Sheerness on 22nd October before resuming her cadet training cruise in the Mediterranean. Other ships of the squadron returned to Rosyth.

Thames Visits.—At the end of her Autumn cruise programme, H.M.S. *Apollo* visited the Port of London from 5th to 10th December, anchoring at Battle Bridge Tier. She flew the flag of Admiral Sir Michael Denny, who was making a farewell visit before being relieved by Admiral Sir John Eccles. Sixteen coastal and inshore minesweepers, comprising a large proportion of the Inshore Flotilla at Harwich, visited London from 24th to 28th November, some berthing in St. Katharine's Dock and the East India Dock. The ships were visited by members of the families of the ships' companies and by a large number of sea cadets and scouts.

Carriers for Far East.—The light fleet carriers *Albion* and *Centaur* returned to Portsmouth in November from operations with the Home Fleet to prepare for service in the Far East. They were due to leave the United Kingdom on 10th January and to perform flying training during the voyage. After calls at Gibraltar and Malta, the *Albion* was to proceed to Bombay (headquarters of the Indian Navy) and the *Centaur* to Karachi (headquarters of the Royal Pakistan Navy) in February, and then in company to Ceylon (headquarters of the Royal Ceylon Navy). Arriving on the Far East Station in March, exercises have been arranged with the Royal Australian and Royal New Zealand Navies before the ships return to the United Kingdom, where they are due in May.

TRAINING SQUADRON.—The light fleet carriers *Theseus* and *Ocean*, of the Home Fleet Training Squadron based on Portland, left in October with a number of military vehicles for Cyprus, and then continued with their Autumn training cruise in the Gibraltar area, returning in December.

EAST INDIES.—The frigate *Loch Alvie* arrived at Socotra Island, east of the Gulf of Aden, on 1st October with 60 tons of millet and dates for the relief of a state of near famine. At the invitation of the British community in Basra, the *Flamingo* on 16th October laid up a White Ensign in St. Peter's Anglican Church, Ashar, Basra, to mark the last visit of the Persian Gulf " Bird " class frigates *Wild Goose*, *Wren*, and *Flamingo*, one of which had visited there every six weeks since 1946. The last of them, the *Flamingo*, arrived at Devonport on 14th December. The cruiser *Gambia*, flagship of Vice-Admiral C. F. W. Norris, Commander-in-Chief, during a six days' visit to Bahrein early in November, was the first cruiser or large vessel to use the Khor Khaliya, or inner harbour.

SOUTH ATLANTIC.—Early in October the frigate *Magpie* visited Tristan da Cunha, and besides conveying stores and passengers for this lonely and rarely visited island also took members of the British Gough Island Expedition. These were to proceed in a local vessel to Gough Island, some 250 miles south-east of Tristan, to spend some months establishing a pilot meteorological station and investigating animal and plant life.

AMERICA AND WEST INDIES.—The netlayer *Protector* has been converted and commissioned for service in the Falkland Islands and Dependencies during the active (i.e., Summer) season from about November to April. She will operate on an annual cycle, returning each year to the United Kingdom about the end of May for overhaul and recommissioning. Hitherto this role had been carried out by a frigate on the station, but these frigates were not strengthened against ice and were less suitable than the *Protector*, which carries two helicopters for ice spotting, communications, and transport.

ATOMIC TESTS, SPECIAL SQUADRON.—A special squadron has been formed to take part in the third series of tests of British atomic weapons in the Monte Bello Islands area, north-west of Australia, in 1956. Commodore Hugh C. Martell is in command, with his broad pendant in the *Narvik*, tank landing ship. In Australian waters the *Narvik* will be joined by other ships from the Royal and Royal Australian Navies.

PERSONNEL

CADETS' TRAINING.—The last prize-giving to cadets in the training carrier *Triumph* took place on 20th December at Devonport when prizes were distributed by the First Sea Lord, Admiral Lord Mountbatten. The *Triumph* was ordered to pay off in the New Year and her duties to be taken over by a training squadron which was formed on 1st November, consisting of the destroyer *Carron*, the frigates *Vigilant* and *Venus*, and the fleet minesweepers *Jewel* and *Acute*. The first cadets from the Britannia Royal Naval College, Dartmouth, joined this squadron early in January. They numbered 89 and will spend one term at sea, living on the mess decks and carrying out the practical duties of seamen. They return to the College in May, 1956, as midshipmen for four terms of technical training, during which time they will return to sea for short periods to further their knowledge of professional subjects.

MATERIEL

LAUNCHES IN 1955.—The list of H.M. Ships launched during the year ending 31st December, 1955, and on which nearly fifty shipbuilders are engaged in 1956, numbers 71, made up as follows :—

Submarine, " Explorer " Class, *Excalibur*	1
Anti-Aircraft Frigates, *Lynx* and *Leopard*	2
Aircraft-Direction Frigates, *Chichester* and *Llandaff* ...	2
Anti-Submarine Frigates, " Whitby " Class, *Scarborough*, *Tenby*, and *Eastbourne*	3

Anti-Submarine Frigates, "Blackwood" Class, *Murray*, *Blackwood*, *Malcolm*, and *Exmouth*	4
Coastal Minesweepers, Type I	23
Inshore Minesweepers	22
Seaward Defence Boats	4
Fast Patrol Boats (M.T.B./M.G.B.)	9
Dockyard Tug, *Confiance*	1
Total	71

In addition to the above, 100 motor boats, ranging from 16-ft. slow motor boats to 75-ft. motor fishing vessels, were completed by various builders during the year.

H.M.S. *Hardy* completed.—H.M.S. *Hardy*, the first to be completed of the "Blackwood" class of anti-submarine frigates, and the first of the new type post-war frigates to come into service since the war, was provisionally accepted from her builders, Messrs. Yarrow and Co., Limited, on 15th December. Frigates of this class are fitted with the latest equipment for locating and killing submarines. They are highly manoeuvrable and the hull form has been designed to enable them to maintain a high speed in heavy seas during submarine search. Of all-welded construction, they have been prefabricated in such a manner as to allow for rapid construction.

Remote Control in H.M.S. *Ark Royal*.—H.M.S. *Ark Royal*, the new aircraft carrier, which left for a tour of duty in the Mediterranean in mid-October, is the first ship to be fitted with remote control for use in the event of atomic attack at sea, and the first to have television diffusion equipment which can be used both for operational and entertainment purposes. If within the 'fall out' area after an atomic attack she would immediately be 'sealed,' that is, she would cease to draw in air from the atmosphere, the air inside the ship being recirculated, and all the ship's complement would immediately be withdrawn to safe positions, away from danger of contamination. Without normal ventilation, the temperature in the engine and boiler rooms would soon become unbearable, and all staff would immediately be withdrawn and the ship steered by remote control from two emergency control rooms on No. 6 deck. It was disclosed in October that the *Ark Royal* had actually been brought to anchor in Sandown Bay, Isle of Wight, by remote control without anyone in the engine-room.

FLEET AIR ARM

New Gannet Squadron.—No. 812 Squadron, first formed in 1933, was re-formed at the R.N. Air Station, Eglinton, near Londonderry, on 7th November, equipped with Fairey Gannet anti-submarine aircraft. After a working-up period it will form part of a carrier air group which will also include Sea Hawk and Wyvern squadrons, to be embarked in a fleet aircraft carrier.

Hibernia Trophy.—Rear-Admiral G. Willoughby, C.B., Flag Officer Flying Training, on 13th October presented at Culdrose, Cornwall, the Hibernia Recognition Trophy to No. 892 Squadron, based at Yeovilton. The Hibernia Cup, the first trophy to come into the possession of the Fleet Air Arm, commemorates the first man-of-war to fly off an aircraft while under way, the battleship *Hibernia*, in 1912.

ROYAL NAVAL RESERVE

Half-Yearly Promotions

The following promotions have been made to date 31st December, 1955:—

Commander, R.N.R., to Captain, R.N.R.—G. W. Houchen, O.B.E., R.D.

Engineering Branch—Commander, R.N.R., to Captain, R.N.R.—E. F. J. Woods, R.D.

Supernumerary List—Commander, R.N.R., to Captain, R.N.R.—M. S. Hodson, R.D.; C. A. Meyer, R.D.

ROYAL NAVAL VOLUNTEER RESERVE

Half-Yearly Promotions

The following promotions have been made to date 31st December, 1955 :—

Commander, R.N.V.R., to Captain, R.N.V.R.—A. V. Turner, D.S.C.

Supply and Secretariat Branch—Commander, R.N.V.R., to Captain, R.N.V.R.—W. R. Proud, V.R.D.

Medical Branch—Surgeon Commander, R.N.V.R., to Surgeon Captain, R.N.V.R.—E. G. Brewis, V.R.D.

Dental Branch—Surgeon Commander (D), R.N.V.R., to Surgeon Captain (D), R.N.V.R.—R. Symmons, V.R.D.

ROYAL MARINES

Commandant General.—Lieutenant-General C. R. Hardy, C.B., C.B.E., D.S.O., the Commandant General, visited the 3rd Commando Brigade in Cyprus and Royal Marines Detachments of the Mediterranean Fleet at Malta between 18th and 27th November.

Retirement.—General Sir John Westall, K.C.B., C.B.E., has been placed on the Retired List (20th September, 1955).

Half-Yearly Promotions.—The following promotions have been made to date 31st December, 1955 :—

Lieutenant-Colonel to Colonel.—R. C. de M. Leathes, M.V.O., O.B.E. ; A. O. Powell, O.B.E.

Major to Lieutenant-Colonel.—D. G. Tweed, M.B.E. ; P. A. Spittall ; N. H. D. McGill.

Gironde Raid Film.—H.R.H. The Duke of Edinburgh attended the première of the film " Cockleshell Heroes " at the Empire Theatre, Leicester Square, on 16th November. The film is based on the canoe raid against enemy shipping in the Gironde Estuary in December, 1942, by a small force of Royal Marines. The only two survivors of the raid, Lieutenant-Colonel H. G. Hasler, D.S.O., O.B.E., and Marine W. E. Sparks, D.S.M., acted as technical advisers, and assistance was given by the Corps in the making of the film.

DOMINIONS AND COLONIES

CANADA

St. Laurent Commissioned.—H.M.C.S. *St. Laurent*, the first of a new class of destroyer escorts of 2,000 tons displacement, built by Canadian Vickers, Limited, was commissioned on 29th October after a shake-down cruise.

Future of H.M.S. *Magnificent*.—According to the Ottawa correspondent of *The Times*, the Canadian Navy would like to retain the British aircraft carrier *Magnificent*, now on loan to them, as a training ship and possibly as a medium for carrying out detection experiments by helicopters against submarines, instead of being returned to the Royal Navy when the new Canadian carrier *Bonaventure*, now under construction at Belfast, is commissioned next October. The *Magnificent* would be used for the training of junior officers and ordinary seamen instead of the R.C.N. cruiser *Quebec*.

AUSTRALIA

Promotion.—The following promotion has been announced by the Commonwealth Naval Board to date 31st December, 1955 :—

Commander to Captain.—J. H. Dowson (acting Captain).

EXPANSION PROGRAMME.—Ten new ships will be added to the Royal Australian Navy by 1961 under a new expansion programme designed to enable it to meet potential war commitments and to support strategic reserve forces in the Far East. In addition, five other ships have been or are being converted for modern warfare. The Navy Minister, Mr. Francis, announced on 2nd October that three new " Daring " class ships are being constructed in Australia ; four anti-submarine frigates will also be built there ; and the light aircraft carrier *Melbourne*, just completed in the United Kingdom, will be the Australian Navy's operational carrier.

H.M.A.S. *MELBOURNE*.—The light fleet aircraft carrier *Majestic*, fitting out at the Vickers-Armstrong's yard at Barrow-in-Furness, was renamed H.M.A.S. *Melbourne* on 28th October at a renaming ceremony performed by Lady White, wife of the High Commissioner for Australia. The *Melbourne*, under the command of Captain G. C. O. Gatacre, R.A.N., is working up in the United Kingdom before sailing for Australia in March.

NEW ZEALAND

CRUISER ON LOAN.—The cruiser *Bellona*, which had been on loan to the Royal New Zealand Navy since 1946, returned to Devonport on 12th December. A sister-ship, the *Royalist*, now being modernized at Devonport, has been offered to New Zealand on loan indefinitely to replace her.

PROMOTION.—The following promotion has been announced to date 31st December, 1955 :—

Royal New Zealand Naval Reserve.—Commander to Captain.—G. H. Edwards, R.D.

CEYLON

NEW ENSIGN.

On 9th December, the fifth anniversary of the founding of the Royal Ceylon Navy, its new Ensign, consisting of the Red Cross of St. George in a white field with the national flag of Ceylon in the upper canton next to the staff, was hoisted for the first time. In a message to the Commander-in-Chief, East Indies, Vice-Admiral C. F. W. Norris, the Captain of the Royal Ceylon Navy, Commodore G. R. M. de Mel, expressed the pride of his officers and men to have served under the White Ensign of the Royal Navy, adding : " Although we will wear different Ensigns, the close ties that have existed will grow stronger as the years pass by because I am sure the spirit that moves us is the same." In a reply the Commander-in-Chief said : " I endorse entirely the sentiments which you express, and wish to assure you that we shall always be pleased and proud to be in company with the ships wearing the White Ensign of the Royal Ceylon Navy."

FOREIGN

FRANCE

INSHORE MINESWEEPERS

The last of 15 inshore minesweepers built in the United Kingdom for N.A.T.O. forces under the U.S. off-shore procurement programme is now being completed. This vessel, the *Pineham*, of 106 ft. 5 in. length with a beam of 20 ft. 6 in., was handed over to the French Navy at a ceremony at H.M.S. *Diligence*, Hythe, on 10th November. The 14 other ships in this group have also been handed over to the French.

GREECE

BRITISH NAVAL MISSION REDUCED.—Rear-Admiral W. H. Selby, C.B., D.S.C., left Athens on 14th October after the expiration of his term of office as Head of the British Naval Mission to Greece since June, 1953. He is not being replaced. With the termination of his appointment the functions of the Mission have been reviewed by the two Governments, and as a result the Mission will be substantially reduced. No relief will be

appointed for Admiral Selby, but a Naval Attaché will be appointed to the staff of H.M. Ambassador to Greece.

ABSTENTION FROM EXERCISES.—It was announced in Athens on 11th October that Greek forces would not take part in the N.A.T.O. exercise "Red Trident II," scheduled for that month. Greek abstention from Allied manoeuvres would continue until the settlement of the issues outstanding after the anti-Greek riots in Turkey in September.

NORWAY

VISIT OF C.-IN-C. TO BRITAIN

The Commander-in-Chief of the Royal Norwegian Navy, Vice-Admiral Johs. E. Jacobsen, and Mrs. Jacobsen, arrived in Britain on 10th October as the guests of the Board of Admiralty for several days. On the night of their arrival they dined with the First Sea Lord, Admiral Lord Mountbatten. During the three following days Admiral Jacobsen visited naval establishments at Portsmouth, Portland, and Londonderry.

PORTUGAL

PRESIDENT'S VISIT.—For their State visit to London from 25th to 28th October, the President of Portugal and Madame Craveiro Lopes travelled in the frigate *Bartolomeu Dias*, which was escorted to the entrance to the Thames by the Portuguese destroyers *Tejo*, *Vouga*, and *Lima*. The British destroyers *Tumult*, *Vigo*, and *Tyrian* escorted the ships up the English Channel from a point some 70 miles south of Plymouth. From the Nore the *Bartolomeu Dias* was escorted up the Thames by the fast patrol boats *Gay Forester*, *Gay Archer*, *Gay Charioteer*, and *Gay Bowman* to Battle Bridge Tier in the Pool of London, where the President and Madame Lopes transferred to the Royal barge for the official reception at Westminster Pier by H.M. The Queen, the Duke of Edinburgh, and other members of the Royal Family. The return to Portugal was made by air.

CHIEF OF STAFF.—It was announced on 23rd November that Vice-Admiral Guerreiro de Brito had been appointed Chief of the Portuguese Naval Staff.

RUSSIA

VISIT TO PORTSMOUTH.—Concurrently with the visit of a British squadron to Leningrad, a squadron of the Soviet Navy visited Portsmouth between 12th and 17th October under the command of Admiral Golovko, Commander-in-Chief of the Baltic Fleet. It included the cruisers *Sverdlov* (flagship) and *Alexander Sevarov*, and the destroyers *Svershenny*, *Smotryashchy*, *Smetlivy*, and *Sposobiry*. During the visit a luncheon party in honour of Admiral Golovko was given by the Board of Admiralty in London. In a letter to the First Sea Lord on his departure from England, Admiral Golovko expressed his deep indebtedness for the warm welcome which had been shown to his squadron by the British Fleet.

MODERN SUBMARINES.—In a speech at the annual dinner of the Chamber of Shipping of the United Kingdom, the First Sea Lord, Admiral Lord Mountbatten, said that since the war the Russians had built 20 large first-class cruisers, more than 100 destroyers, and more than 100 large and 60 small submarines. They now had ready for immediate service 350 modern submarines, the greatest potential threat the Royal Navy had ever been called upon to face.

UNITED STATES

NEW SHIPS COMMISSIONED.—The *Forrestal*, described as the biggest warship in the world, and the first to be completed of a class of five angled-deck aircraft carriers, was commissioned on 1st October at the Norfolk Navy Yard at Portsmouth, Virginia. At full load, the *Forrestal* will displace 75,900 tons. On 1st November, the first vessel to carry anti-aircraft guided missiles, the converted cruiser *Boston*, was commissioned at the

Navy Yard, Philadelphia. Speaking at the ceremony, Admiral Arleigh A. Burke, Chief of Naval Operations, announced the appointment of Rear-Admiral John H. Sides, missile director for the Navy Department, as the Navy's first seagoing missile admiral. He will command a division of three warships carrying guided missiles, the *Boston*, the *Canberra*, and another cruiser now undergoing conversion. The *Canberra* is expected to be ready for commissioning in the Spring.

U.S.S. *Saratoga* Launched.—The second carrier of the " Forrestal " class, the *Saratoga*, was symbolically named in a graving dock in the Brooklyn Navy Yard, New York, on 8th October. Among those who attended the ceremony was Mr. J. P. L. Thomas, First Lord of the Admiralty. The *Saratoga* will cost over 200 million dollars and is expected to develop more shaft horse-power—upwards of 200,000—than the *Forrestal*.

Atomic Submarines.—Addressing the graduating class of the Submarine Officer School at Groton, Connecticut, on 16th December, Mr. Albert Pratt, Assistant Secretary of the Navy, said he ventured to predict that no more conventionally powered submarines will have their keels laid after this year. Enormous strides were being made in the nuclear power field.

Marine Corps.—On 30th December, Lieutenant-General Randolph Pate was sworn in as Commandant of the U.S. Marine Corps in succession to General Lemuel Shepherd

ARMY NOTES

GREAT BRITAIN

H.M. The Queen

The Princess Margaret presented Colours to the 1st Battalion, The Highland Light Infantry, of which Regiment Her Royal Highness is Colonel-in-Chief, at Bulford on 20th October.

The Duke of Gloucester, as Colonel-in-Chief, inspected the 10th Royal Hussars (P.W.O.) at Tidworth on 15th October and took the Salute at the Drive Past. On 16th October, His Royal Highness laid a wreath on the Regimental War Memorial at Bhurtpore Barracks, Tidworth.

The Duke of Gloucester, as Colonel-in-Chief of the Royal Army Service Corps, visited Buller Barracks, Aldershot, on 17th October.

The Queen has been graciously pleased to approve the following appointments :—

To be Aides-de-Camp to Her Majesty.—Brigadier E. Dynes, O.B.E., late R.A.S.C. (12th September, 1955), vice Major-General W. G. Roe, C.B.E., A.M.I.Mech.E., promoted ; Brigadier A. C. F. Jackson, C.B.E., late Infantry (27th October, 1955), vice Brigadier F. W. Sandars, D.S.O., retired ; Brigadier G. W. Eden, C.B.E., late Infantry (29th October, 1955), vice Brigadier (Honorary Major-General) R. A. Riddell, C.B.E., retired.

To be Colonels Commandant.—Of the Royal Regiment of Artillery, Major-General G. W. E. Heath, C.B., C.B.E., D.S.O., M.C. (30th October, 1955), vice Major-General S. C. M. Archibald, M.C., tenure expired, and Major-General H. C. Phipps, C.B., D.S.O. (28th December, 1955), vice Major-General G. C. Kemp, C.B., M.C., tenure expired ; of the Royal Army Service Corps, Major-General H. M. Whitty, C.B., O.B.E. (8th November, 1955), vice Major-General F. S. Clover, C.B., C.B.E., M.I.Mech.E., resigned ; of the Royal Army Medical Corps, Major-General T. Young, C.B., O.B.E., M.D. (12th September, 1955), vice Major-General K. A. M. Tomory, C.B., O.B.E., M.B., resigned.

To be Colonels of Regiments.—Of The Royal Scots (The Royal Regiment), Brigadier (Temporary Major-General) R. Delacombe, C.B., D.S.O. (1st January, 1956), vice Major (Honorary Brigadier) N. R. Crockatt, C.B., D.S.O., M.C., resigned ; of The Lancashire Fusiliers, Colonel (Temporary Brigadier) P. G. Bamford, D.S.O., O.B.E. (31st December, 1955), vice Major-General G. Surtees, C.B., C.B.E., M.C., tenure expired ; of The Cheshire Regiment, Major-General T. Brodie, C.B., C.B.E., D.S.O. (21st December, 1955), vice Lieut.-General A. E. Percival, C.B., D.S.O., O.B.E., M.C., tenure expired ; of The East Lancashire Regiment, Major-General W. H. Lambert, C.B., C.B.E. (1st January, 1956), vice Colonel (Honorary Brigadier) J. W. Pendlebury, D.S.O., M.C., tenure expired.

Representative Colonels Commandant, 1956.—The following have been appointed :—

Royal Armoured Corps (*Cavalry Wing*).—General Sir Richard L. McCreery, G.C.B., K.B.E., D.S.O., M.C., D.L. (*R.T.R. Wing*).—Field-Marshal The Viscount Montgomery of Alamein, K.G., G.C.B., D.S.O. *Royal Tank Regiment.*—Major-General N. W. Duncan, C.B., C.B.E., D.S.O.

Royal Regiment of Artillery.—Major-General A. H. Hornby, C.B., C.B.E., M.C.

Corps of Royal Engineers.—Colonel (Honorary Major-General) Sir J. Drummond Inglis, K.B.E., C.B., M.C.

Royal Corps of Signals.—Major-General Sir Hubert Rance, G.C.M.G., G.B.E., C.B.

Royal Army Service Corps.—Major-General Sir Reginald Kerr, K.B.E., C.B., M.C., M.Inst.T.

Royal Army Medical Corps.—Major-General T. Young, C.B., O.B.E., M.D.

Royal Army Ordnance Corps.—Major-General Sir Neville Swiney, K.B.E., C.B., M.C.

Corps of Royal Electrical and Mechanical Engineers.—Major-General W. S. Tope, C.B., C.B.E., M.I.Mech.E., M.I.E.E.

Royal Army Dental Corps.—Colonel R. Abbott.

Honours and Awards

Malaya.—The following were included on 25th October in the list of awards published in the Supplement to *The London Gazette* of 21st October, 1955, in recognition of distinguished services in Malaya during the period 1st January to 30th June, 1955 :—

C.B.—Major-General D. D. C. Tulloch, D.S.O., M.C. ; Major-General (temporary) E. C. Colville, D.S.O.

New Year Honours.—The following were included in the New Year Honours List :—

K.C.B.—Lieut.-General Sir Francis W. Festing, K.B.E., C.B., D.S.O. ; Lieut.-General R. A. Hull, C.B., D.S.O.

C.B.—Major-General V. D. G. Campbell, D.S.O., O.B.E. ; Major-General W. R. Cox, D.S.O. ; Major-General B. Daunt, C.B.E., D.S.O. ; Major-General F. C. Hilton-Sergeant, C.B.E., Q.H.P., M.B. ; Major-General R. G. S. Hobbs, D.S.O., O.B.E. ; Major-General E. S. Lindsay, C.B.E., D.S.O. ; Major-General D. J. Muil, O.B.E., Q.H.D.S., L.D.S. ; Major-General F. J. O'Meara, Q.H.P., M.D., F.R.C.P.I. ; Major-General H. MacG. Paterson, C.B.E. ; Major-General J. C. T. Willis, C.B.E.

G.B.E.—General Sir Miles C. Dempsey, K.C.B., K.B.E., D.S.O., M.C.

K.B.E.—Lieut.-General B. C. H. Kimmins, C.B., C.B.E. ; Lieut.-General H. Murray, C.B., D.S.O.

Royal Red Cross, First Class.—Lieut.-Colonel (temporary) Mary A. J. Condon, Q.A.R.A.N.C. ; Major Evelyn M. Turner, M.B.E., Q.A.R.A.N.C.

Army Council

The Queen has been pleased by Letters Patent under the Great Seal bearing the date 29th September, 1955, to appoint the following to be Her Majesty's Army Council :—

Brigadier the Rt. Hon. A. H. Head, C.B.E., M.C.—*President.*

Brigadier F. H. R. Maclean, C.B.E.—*Vice-President.*

General Sir Gerald W. R. Templer, G.C.B., G.C.M.G., K.B.E., D.S.O.

General Sir Cameron G. G. Nicholson, G.C.B., K.B.E., D.S.O., M.C., A.D.C.

Lieut.-General Sir Maurice S. Chilton, K.B.E., C.B.

Lieut.-General W. P. Oliver, C.B., O.B.E.

Lieut.-General Sir Alfred D. Ward, K.B.E., C.B., D.S.O.

Sir George W. Turner, K.C.B., K.B.E.

Appointments

War Office.—Brigadier L. de M. Thuillier, O.B.E., A.D.C., appointed Director of Telecommunications, with the temporary rank of Major-General (10th October, 1955).

The Reverend Bernard Navin appointed Principal Roman Catholic Chaplain (31st January, 1956).

Colonel (Temporary Brigadier) R. W. Ewbank, C.B.E., D.S.O., appointed Director of Movements, with the temporary rank of Major-General (February, 1956).

Major-General J. G. Cowley, C.B., C.B.E., A.M., appointed Vice Quarter-Master-General (March, 1956).

Colonel (Temporary Brigadier) G. E. Butler, C.B.E., B.Sc., M.I.Mech.E., appointed Inspector Royal Electrical and Mechanical Engineers, with the temporary rank of Major-General (April, 1956).

Major-General W. A. D. Drummond, C.B., C.B.E., F.R.C.S., L.R.C.P., appointed Director, Army Medical Services (April, 1956).

Brigadier C. R. Price, C.B., C.B.E., A.D.C., B.A., B.Sc., appointed Director of Military Intelligence, with the temporary rank of Major-General (May, 1956).

UNITED KINGDOM LAND FORCES.—General Sir E. C. Robert Mansergh, K.C.B., K.B.E., M.C., appointed Commander-in-Chief (January, 1956).

UNITED KINGDOM.—General Sir George W. E. J. Erskine, G.C.B., K.B.E., D.S.O., A.D.C., appointed G.O.C.-in-C., Southern Command (1st November, 1955).

Major-General L. N. Tyler, C.B., O.B.E., appointed Commandant, Headquarters Base Workshop Group, R.E.M.E., Chilwell (January, 1956).

Brigadier (Temporary Major-General) E. C. Colville, C.B., D.S.O., appointed G.O.C., 51st (Highland) Division, T.A., and Highland District (March, 1956).

Major-General T. P. D. Scott, C.B.E., D.S.O., appointed G.O.C., North-West District and 42nd Infantry Division, T.A. (May, 1956).

GERMANY.—Brigadier R. J. Moberly, O.B.E., appointed Chief Signal Officer (Major-General), Headquarters, Northern Army Group, with the temporary rank of Major-General (12th September, 1955).

Colonel (Temporary Brigadier) E. D. Howard Vyse, C.B.E., M.C., appointed Major General Artillery, Headquarters, Northern Army Group (January, 1956).

MIDDLE EAST LAND FORCES.—Brigadier A. H. G. Ricketts, C.B.E., D.S.O., appointed Director of Security, Cyprus, with the temporary rank of Major-General (21st September, 1955), and Commander (Major-General), Cyprus District, being regranted the temporary rank of Major-General (20th October, 1955).

WEST AFRICA.—Major-General K. G. Exham, C.B., D.S.O., appointed G.O.C., Nigeria District (February, 1956).

PROMOTIONS

Major-Generals.—Temporary Major-Generals or Brigadiers to be Major-Generals :—R. N. H. C. Bray, C.B.E., D.S.O. (29th October, 1955) ; R. Younger, C.B.E., D.S.O., M.C. (29th November, 1955) ; A. H. Musson (29th November, 1955) ; R. A. Bramwell Davis, D.S.O. (29th November, 1955).

Brigadiers or Colonels to be temporary Major-Generals :—R. J. Moberly, O.B.E. (12th September, 1955) ; A. H. G. Ricketts, C.B.E., D.S.O. (21st September, 1955) ; R. Delacombe, C.B.E., D.S.O. (4th October, 1955) ; L. de M. Thuillier, O.B.E., A.D.C. (10th October, 1955) ; G. A. T. Pritchard, C.B.E. (1st November, 1955) ; J. N. Carter, C.B.E. (7th November, 1955) ; G. P. Gregson, C.B.E., D.S.O., M.C. (2nd January, 1956).

RETIREMENTS

The following General Officers have retired :—Major-General W. R. D. Hamilton, C.B., O.B.E., Q.H.P., M.D. (17th October, 1955) ; Major-General Sir Peter Bednall, K.B.E., C.B., M.C. (21st October, 1955) ; Major-General F. R. G. Matthews, C.B., D.S.O. (29th October, 1955) ; Lieut.-General Sir Ernest E. Down, K.B.E., C.B. (29th November, 1955) ; Major-General D. C. T. Swan, C.B., C.B.E. (29th November, 1955) ; Major-General G. D. Fanshawe, C.B., D.S.O., O.B.E. (29th November, 1955) ; Major-General W. R. Goodman, C.B., D.S.O., M.C. (29th November, 1955) ; Major-General R. E. Urquhart, C.B., D.S.O. (20th December, 1955).

Exercise "Searchlight"

This six-day exercise, which commenced at the end of September, was carried out on Salisbury Plain by troops of the 3rd Infantry Division from Eastern Command. The object was to practise defence by a widely dispersed infantry division under conditions of assumed nuclear war, and the exercise therefore included tests in digging in, provision of overhead protection, concealment, and camouflage; a difficult matter in view of the chalky nature of the Plain.

Brevet Promotion to Lieut.-Colonel

The names of 31 Majors who have been promoted to the rank of Brevet Lieut.-Colonel with effect from 1st July, 1955, were published on 20th December in the Supplement of *The London Gazette* of 16th December, 1955.

Regular Army Recruiting

The Regular Army recruiting statistics for November, 1955, show that the total number of enlistments from civil life during the month were 1,995 men and 102 boys compared with 2,201 and 147 in October. The figures for re-enlistments were 2 from Short Service (October, 2) and 255 from National Service (October, 308).

Reorganization of the Reserve Army

On 20th December, Mr. Head, Secretary of State for War, made a statement in the House of Commons regarding the reorganization of the Reserve Army to meet the changes caused by nuclear conditions. The main points in his announcement were as follows:—

(*a*) Only two Territorial divisions and supporting troops are to remain organized at full scale to meet our N.A.T.O. commitments.

(*b*) The remainder, retaining their divisional organization, will be put on lower establishment and will have home defence in all its aspects as their initial role.

(*c*) Six armoured regiments will be retained to support the two Territorial divisions earmarked for N.A.T.O.

(*d*) The remainder of the 49th (West and Midland) Armoured Division, 52nd (Lowland) Mixed Division, and the 56th (London) Armoured Division will be converted to infantry.

(*e*) One parachute brigade group only of 16th Airborne Division will be retained, the remainder will be converted to infantry.

(*f*) A number of non-divisional artillery units of the Territorial Army will be converted to other roles.

(*g*) Many Army Emergency Reserve units will be disbanded.

(*h*) The Home Guard, "which will have an essential part to play in our defence organization," is to be retained on a reserve basis only.

(*i*) The £12 bounty is to be increased to £20 after three years' service throughout the Reserve Army.

Miscellaneous

Presentation of Regimental Colours.—Field-Marshal Viscount Montgomery presented new Colours to the 1st Battalion, The South Lancashire Regiment, in the Bowes Museum park at Barnard Castle on 25th October.

British Troops leave Khartoum.—On 10th October, the 1st Battalion, The Royal Leicestershire Regiment, marched out of the British barracks and through the streets of Khartoum carrying the Colours and with bayonets fixed, to entrain for their journey out of the Sudan.

Freedom of Hendon for The Middlesex Regiment.—The freedom of entry to the borough was conferred by the Mayor and Corporation of Hendon on The Middlesex Regiment (Duke of Cambridge's Own) at a civic ceremony at Hendon on 22nd October, to mark the regiment's bicentenary.

TRAINING IN THE USE OF THE 'CORPORAL.'—A Royal Artillery team of five officers and 12 warrant officers sailed from Southampton on 8th December for the United States, to complete the final stages of their training in the latest guided weapons techniques.

SCOTS GUARDS TOUR IN THE UNITED STATES.—The regimental band, pipers, and Highland dancers of the Scots Guards concluded a nine-week tour of the United States with two performances in Madison Square Gardens on 11th December.

UNVEILING OF REGIMENTAL PLAQUES.—Field-Marshal Sir Claude Auchinleck unveiled a collection of 80 regimental plaques of the Indian Army at the Royal Military Academy, Sandhurst, on 23rd October.

PRESENTATION TO W.R.A.C.—On 18th October, at the W.R.A.C. Depôt, General Sir Frederick Pile, on behalf of all ranks of the disbanded Anti-Aircraft Command, presented to the Women's Royal Army Corps, " with affection and respect," a silver model 3.7 in. anti-aircraft gun.

DOMINIONS AND COLONIES

CANADA

H.R.H. THE DUKE OF EDINBURGH PRESENTS COLOURS.—The Duke of Edinburgh, Colonel-in-Chief of the Regiment, presented Colours to the 2nd Battalion, The Royal Canadian Regiment, at Fort York, Germany, on 17th October.

TOUR OF H.R.H. THE PRINCESS ROYAL.—During her tour of Canada from 29th September–24th October, the Princess Royal, as Colonel-in-Chief, inspected detachments of the Royal Canadian Corps of Signals at the Royal Canadian School of Signals on 8th October; inspected The Canadian Scottish (Princess Mary's) in Victoria, B.C., on 15th October; and visited various Royal Canadian Corps of Signals units, the Royal Military College, Kingston, and the Canadian Services College, Royal Roads.

LADY PATRICIA RAMSAY REVIEWS P.P.C.L.I.—Lady Patricia Ramsay, Colonel-in-Chief of the Regiment, reviewed the 2nd Battalion, Princess Patricia's Canadian Light Infantry, at Hemer, Germany, on 8th October.

APPOINTMENTS.—Colonel D. A. G. Waldock, C.D., has been seconded to the Defence Research Board as Chief Superintendent of the Canadian Armament Research and Development Establishment, with the acting rank of Brigadier. He has, in addition, taken over command of the Canadian Armament Design and Experimental Establishment.

Colonel C. R. Boehm, M.B.E., C.D., has been seconded to the Defence Research Board as Senior Staff Officer, Liaison.

Colonel J. H. Eaman, C.D., has been appointed Director of Armament Development.

Colonel W. D. Wishart, O.B.E., C.D., has been appointed Director of Electrical and Communications Development.

MILITIA SUMMER TRAINING.—A total of 20,568 Canadian Army Militia men and women attended 21 Militia camps in 1955, compared with 16,593 in 18 camps in 1954. The figure included 4,623 officers.

MILITARY EQUIPMENT SENT TO N.A.T.O. COUNTRIES.—A number of shipments were sent to N.A.T.O. countries between October and December, 1955. Equipment included field artillery tractors, three-ton and ambulance type trucks, ammunition, wireless sets and spare parts, radar equipment, jeep trailers, and vehicle spare parts.

AUSTRALIA

COLONEL-IN-CHIEF, ROYAL AUSTRALIAN ARMOURED CORPS.—H.M. The Queen has approved the appointment of H.R.H. the Duke of Gloucester as Colonel-in-Chief of the Royal Australian Armoured Corps.

AWARD OF THE GEORGE CROSS.—It was announced on 30th December in the Supplement to *The London Gazette* of 27th December, that The Queen had been graciously

pleased to approve the posthumous award of the George Cross to :—

No. 2/400186 Private Horace William Madden, 3rd Battalion, Royal Australian Regiment, in recognition of gallant and distinguished services whilst a prisoner of war in Korea.

NEW YEAR HONOURS.—The following was included in the New Year Honours List :—

K.B.E.—Lieut.-General H. Wells, C.B., C.B.E., D.S.O.

APPOINTMENTS.—Major-General R. E. Wade, O.B.E., has been appointed Head of the Australian Joint Services in the United States.

Brigadier J. G. N. Wilton, C.B.E., D.S.O., has become Brigadier General Staff 'A' at Army Headquarters.

Brigadier C. H. Finlay, O.B.E., is to become Australian Army Representative in the United Kingdom.

Brigadiers T. J. Daly, C.B.E., D.S.O., and J. W. Harrison, O.B.E., are attending the 1956 course at the Imperial Defence College.

Colonel J. S. Andersen, O.B.E., has been appointed Brigadier in Charge of Administration, Eastern Command, and has been promoted to Brigadier.

ARMY ESTIMATES.—The Minister for the Army, Mr. Francis, in the discussion on the defence estimates in the House of Representatives, said that the current strength of the Army was 183,889, made up as follows : Regular Army, 22,927 ; Citizen Military Force and National Service, 90,118 ; Reserve, 39,046 ; School and Regimental Cadets, 31,798. The cost of the Army for the year, 1955–56, was £A7 per head of population. This, he claimed, was the cheapest premium for security in the world.

The Minister said that £A11,250,000 would be spent in providing the latest type of armaments and equipment to keep the Army abreast of modern developments in the technique of war. These would include :—telecommunications equipment ; mines and other special equipment ; replacement of the .303 Lee Enfield rifle with the FN rifle and ammunition, which would be made in Australia (first deliveries being expected in 1958) ; replacement of armoured recovery vehicles used for Matilda and Churchill tanks with vehicles suitable for Centurion tanks ; and provision of Auster aircraft for use by field artillery units in artillery observation and control of fire.

1ST BATTALION, ROYAL AUSTRALIAN REGIMENT.—The 1st Battalion, Royal Australian Regiment, serving with the Commonwealth Division in Korea, recently celebrated its 10th anniversary. It is the first infantry battalion of the Australian Regular Army to have had 10 years of unbroken history as a unit. The Battalion was formed in Borneo just after the end of the 1939–45 War from veterans of the island campaigns who had volunteered to serve on with the Occupation Forces in Japan. It was known then as the 65th Australian Infantry Battalion. The personnel for the new unit were concentrated at Balikpapan, Borneo, and the Battalion came into being on 12th October, 1945. It has been on its second tour in Korea since April, 1954.

EAST AFRICA

ARMY COMMISSIONS FOR EAST AFRICANS

It was announced by the Colonial Office on 3rd January that residents who are British subjects or British protected persons living in East Africa can now obtain commissions in the East African land forces and will be trained at the Royal Military Academy, Sandhurst. This scheme is designed to encourage the territories of East Africa to provide officers for their own military forces. Hitherto officers of the K.A.R. and other units of the East African forces have been provided by the British Army.

FOREIGN

BELGIUM

Fewer Conscripts in 1956

M. Spinoy, the Minister of Defence, stated on 20th November that in 1956 there would be available only 44,000 army conscripts against 56,000 in 1955, and Belgium would be able to form only two active divisions instead of three.

WESTERN GERMANY

Rebirth of German Army

The first 100 officers, non-commissioned officers, and men of the new German Army received their letters of appointment from Herr Blank on 12th November, 1955.

LIBYA

Supply of British and U.S. Arms

It was announced on 16th November by the Prime Minister of Libya that the British and U.S. Governments had decided to supply the Libyan Army, unconditionally, with full equipment for one battalion, including armoured cars.

UNITED STATES

Army Tests with Aerocycle

It was announced on 29th December that the U.S. Army has purchased 12 experimental models of a new flying machine called the ' aerocycle,' to test its possible uses with ground troops. Consisting of a platform, engine, and rotor, the aerocycle is a small helicopter which is operated by one man in a standing position and guided by the distribution of his weight. The machine is said to be able to carry a load of 300 lb. at a top speed of 65 m.p.h., and to have a range of 150 miles. The controls are stated to be similar to those of a motor bicycle.

NOTICE

Pakistan Army Museums

The Pakistan Army authorities have recently decided to set up a central army museum and some regimental museums on the lines of similar institutions in the United Kingdom. G.H.Q. Pakistan will be most grateful to receive donations of suitable material for display in these museums from the British public and institutions, and particularly from those officers and men who served in the old Indian Army units which are now part of the Pakistan Army. Donations will also be welcomed from those British units who served on the North-West Frontier, in the Punjab, and other areas now in Pakistan.

Any type of material suitable for exhibition in a museum will be welcomed. The following items will be of special interest :—Portraits of famous people or portraits of special interest either as works of art or showing the uniform of the period ; paintings and prints of military and historical interest or as works of art ; Colours and banners ; histories, records, documents, albums, etc. ; medals and decorations ; weapons, swords, etc., only if of special interest ; full-dress uniforms and head-dresses.

All exhibits should be addressed and despatched to :—The Military Adviser, Office of the High Commissioner for Pakistan in the U.K., 35, Lowndes Square, London, S.W.1. A label should be attached to each exhibit showing the name and address of sender ; relationship, if any, between the donor and the origin of the exhibit ; and description of the exhibit, giving the fullest possible details.

AIR NOTES

GREAT BRITAIN

H.M. The Queen

Unveiling of R.A.F. Memorial.—On 1st November, 1955, the Duke of Edinburgh, as President of the Royal Air Force Association, unveiled a Thanksgiving Memorial (an astronomical clock) in York Minster. It commemorates officers and airmen of Bomber Command, Coastal Command, and Fighter Command who were killed or missing while operating from stations in north-east England.

New Year Honours

The following were included in the New Year Honours List :—

G.C.B.—Air Chief Marshal Sir Basil E. Embry, K.C.B., K.B.E., D.S.O., D.F.C., A.F.C.

K.C.B.—Acting Air Marshal L. Darvall, C.B., M.C. ; Air Vice-Marshal D. Macfadyen, C.B., C.B.E. ; Air Marshal Sir Robert H. M. S. Saundby, K.B.E., C.B., M.C., D.F.C., A.F.C. (Retd.).

C.B.—Air Vice-Marshal D. H. F. Barnett, C.B.E., D.F.C. ; Air Vice-Marshal A. Earle, C.B.E. ; Air Vice-Marshal W. M. L. MacDonald, C.B.E., D.F.C. ; Acting Air Vice-Marshal W. J. M. Akerman, C.B.E. ; Air Commodore G. Bearne ; Air Commodore G. J. C. Paul, D.F.C. ; Acting Air Commodore R. A. C. Carter, D.S.O., D.F.C. ; Group Captain J. M. Birkin, D.S.O., O.B.E., D.F.C., A.F.C., R.Aux.A.F.

K.B.E.—Air Vice-Marshal L. J. V. Bates, C.B., C.B.E. (Retd.).

Appointments

Air Ministry.—Air Marshal Sir Dermot A. Boyle, K.C.V.O., K.B.E., C.B., A.F.C., appointed Chief of the Air Staff (1st January, 1956) in the rank of Air Chief Marshal.

Air Vice-Marshal L. W. Cannon, C.B., C.B.E., appointed Director-General of Organization (12th December, 1955).

Air Commodore J. H. Harris, C.B., C.B.E., appointed Director of Ground Defence (December, 1955).

Air Commodore S. C. Widdows, D.F.C., appointed Director of Operations (Air Defence) (January, 1956).

Bomber Command.—Air Commodore K. B. Cross, C.B., C.B.E.,F.C., D.S.O., D. appointed Air Officer Commanding No. 3 (Bomber) Group, with the acting rank of Air Vice-Marshal (January, 1956).

Fighter Command.—Air Marshal Sir Thomas G. Pike, K.C.B., C.B.E., D.F.C., appointed Air Officer Commanding-in-Chief (mid-1956).

Air Vice-Marshal H. L. Patch, C.B., C.B.E., appointed temporary Air Officer Commanding-in-Chief with the acting rank of Air Marshal (1st January, 1956).

Air Commodore V. S. Bowling, C.B.E., appointed Air Officer Commanding No. 11 Group, with the acting rank of Air Vice-Marshal (January, 1956).

Coastal Command.—Air Marshal Sir Bryan V. Reynolds, K.C.B., C.B.E., appointed Air Officer Commanding-in-Chief (April, 1956).

Transport Command.—Air Vice-Marshal A. McKee, C.B., C.B.E., D.S.O., D.F.C., A.F.C., appointed Air Officer Commanding-in-Chief (15th October, 1955).

Home Command.—Air Marshal Sir Douglas Macfadyen, K.C.B., C.B.E., appointed Air Officer Commanding-in-Chief (March, 1956).

TRAINING COMMAND.—Air Commodore H. R. Graham, C.B.E., D.S.O., D.F.C., appointed Air Officer Commanding No. 23 (Training) Group with the acting rank of Air Vice-Marshal (January, 1956).

MIDDLE EAST AIR FORCE.—Air Commodore P. B. L. Potter, C.B.E., M.D., Ch.B., D.P.H., D.T.M. & H., Q.H.S., appointed Principal Medical Officer with the acting rank of Air Vice-Marshal (November, 1955).

GIBRALTAR.—Air Commodore J. D. Miller appointed Air Officer Commanding (January, 1956).

PROMOTIONS

Air Marshal to be Air Chief Marshal.—Sir Dermot A. Boyle, K.C.V.O., K.B.E., C.B., A.F.C. (1st January, 1956).

Air Vice-Marshals (acting Air Marshals) to be Air Marshals.—Sir George R. Beamish, K.C.B., C.B.E.; Sir Bryan V. Reynolds, K.C.B., C.B.E. (1st January, 1956).

Air Vice-Marshal to be Air Marshal.—Sir Douglas Macfadyen, K.C.B., C.B.E. (1st January, 1956).

Air Commodores (acting Air Vice-Marshals) to be Air Vice-Marshals.—W. G. Pretty, C.B.E.; M. L. Heath, O.B.E.; P. S. Blockey, C.B., C.B.E., B.A., M.I.Mech.E.; G. L. Worthington, C.B.E.; P. B. L. Potter, C.B.E., M.D., Ch.B., D.P.H., D.T.M. & H., Q.H.S. (1st January, 1956).

Air Commodore to be Air Vice-Marshal.—K. B. B. Cross, C.B., C.B.E., D.S.O., D.F.C. (1st January, 1956).

Group Captain (acting Air Vice-Marshal) to be Air Vice-Marshal.—A. C. Kermode, O.B.E., M.A., F.R.Ae.S., A.D.C. (1st January, 1956).

RETIREMENTS

Air Marshal Sir Victor E. Groom, K.C.V.O., K.B.E., C.B., D.F.C. (26th September, 1955); Air Marshal Sir Lawrence Pendred, K.B.E., C.B., D.F.C. (13th October, 1955); Air Vice-Marshal G. Harcourt-Smith, C.B., C.B.E., M.V.O. (1st November, 1955).

FLIGHTS

A Canberra of Bomber Command on a long distance 'lone-ranger' flight from R.A.F. Wyton flew non-stop to Aden on 24th October. The distance of 3,320 miles was covered at 492 m.p.h. The crew comprised Squadron Leader E. J. Holloway, pilot, and Flying Officer T. J. Broom, navigator.

OPERATIONS

Air operations against the communist terrorists in the Federation of Malaya—suspended on 23rd September after the announcement of the Federal Government's amnesty terms—have been resumed. On 25th November, six Canberras of No. 12 Squadron bombed a terrorist camp in northern Perak soon after daylight. This camp was discovered through visual reconnaissance by Auster aircraft of No. 656 A.O.P. Squadron, which marked the target for the Canberras. On 26th November, four Lincolns of No. 1 R.A.A.F. Squadron bombed and strafed terrorist resting places on the Pengeranh Peninsula just east of Singapore. On 27th November, six Canberras of No. 12 Squadron bombed an area target west of the Cameron Highlands. On 28th November, Canberras of No. 12 Squadron attacked two targets in Negri Sembilan State.

ORGANIZATION

RETURN OF NO. 216 SQUADRON.—At the beginning of November, 1955, No. 216 Squadron left R.A.F. Station, Fayid, Egypt, and arrived at R.A.F. Station, Lyneham. This is the first time that the Squadron has been based in England since 1917. It is equipped with Valetta aircraft and has been transferred from the Middle East to Transport Command.

No. 12 Squadron on Operations in Malaya.—This Squadron, equipped with Canberra jet bombers, has relieved No. 617 Squadron which has been operating against the terrorists in Malaya.

New Base for M.E.A.F.—The latest R.A.F. airfield in the Middle East at Akrotiri should be ready for flying operations shortly. It is sited on the southern coast of Cyprus.

Materiel

Supersonic climbs by P.1 and F.D.2.—Britain is developing two types of interceptor fighter powered by a rocket and a jet engine. One is being built by Saunders-Roe and the other by A. V. Roe & Co. Such aircraft are likely to be the next step after the P.1 fighter. A further disclosure was that the P.1 and the Fairey Delta 2 research machine have both exceeded the speed of sound while climbing as well as in level flight.

New P.1 may attack Speed Record.—An attempt to set up an air speed record at 1,000 m.p.h. with the P.1 jet fighter is being planned for this year by the English Electric Company. It is hoped to beat the record before the Society of British Aircraft Constructors' show at Farnborough, Hants, in September. The P.1 to be used will be a new prototype powered by two Rolls-Royce Avon engines instead of two Armstrong-Siddeley Sapphires fitted in the existing prototypes. These planes are already believed to have flown at about 900 m.p.h.

Rolls-Royce will make Rocket Motors.—Rolls-Royce, Ltd., is to enter a new field—the making of rocket motors. This follows the signing of a 10 years' technical assistance agreement with North American Aviation, Inc., and production at the Rolls-Royce works in Britain will begin this year. Technicians of the company have already investigated proving grounds in different parts of the Country.

"Sarah" in Service.—Any R.A.F. fighter pilot who force-lands in the sea can now call help from 75 miles away by operating the "Sarah" (Search and Rescue and Homing) radio beacon, a transmitter eight inches high fitted into his 'Mae West.' The device came into full operational use with Fighter Command in December, 1955.

Hunter Restrictions Officially Denied.—The Air Ministry has announced that Hawker Hunter jet fighters are being flown free of any restriction, like other planes of comparable type.

Tiger Moth Retires from R.A.F.—The Tiger Moth, favourite aircraft of thousands of pilots, is active no more. The last four of the 5,145 delivered to the R.A.F. since 1930 have been grounded and await disposal.

Mosquito's last Operational Sortie.—The last de Havilland Mosquito in operational squadron service with the Royal Air Force made its final operational sortie on 15th December, 1955, just over 15 years after the Mosquito prototype first flew in 1940. The only Mosquitos remaining in the R.A.F. will be a few in various training roles at home and overseas. Altogether 7,781 were built, of which some 7,200 were delivered to the R.A.F.

Miscellaneous

R.A.F. part in Trans-Antarctic Expedition.—Two R.A.F. pilots, two ground crew, and two aircraft are taking part in the Commonwealth Trans-Antarctic Expedition.

Brooke-Popham Memorial Trophy.—A memorial trophy in commemoration of the late Air Chief Marshal Sir Robert Brooke-Popham has been instituted to be competed for annually by students at the R.A.F. Staff College, Bracknell. It is awarded for the best essay on a topical subject of Service interest, and was won in 1955 by Squadron Leader B. Spray.

Best University Air Squadron.—Birmingham University Air Squadron has been judged the best of 17 university air squadrons in Great Britain and Northern Ireland and has been awarded the Hack Trophy for 1955. Second was Nottingham U.A.S., and third, St. Andrews (Scotland).

DOMINIONS AND COLONIES

AUSTRALIA

NEW TRAINING AIRCRAFT.—The first two of 60 Winjeel training aircraft ordered for the Royal Australian Air Force have been delivered to the R.A.A.F. Station at Laverton, Victoria. The aircraft have been designed and built in Australia and will replace the Tiger Moth and Wirraway as basic training aircraft.

R.A.A.F. MALAYAN BASE.—It has been officially announced that the R.A.A.F. will have its own complete base in Malaya when its fighter and bomber squadrons move into Butterworth. It will be commanded by a R.A.A.F. air commodore and will come under the overall command of the R.A.F. Air Officer Commanding, Malaya Command.

NEW ZEALAND

NEW D.C.A.S.

Her Majesty's Government in the United Kingdom have placed at the disposal of the Government of New Zealand the services of Group Captain G. C. Eveleigh, O.B.E., for appointment as Deputy Chief of the Air Staff of the R.N.Z.A.F. with the acting rank of Air Commodore (November, 1955).

SOUTH AFRICA

PURCHASE OF SABRES IN CANADA

The South African Government has placed an order, valued at $10,000,000, with Canadair, Ltd., Montreal, for 37 Sabre F.86 Mk. 6 fighters. These will be the first Canadian-built jet fighters ever exported commercially. Pilots of the S.A.A.F. will be trained in Canada to fly the aircraft. When delivery is started in April, 1956, the first trainees will ferry the aircraft to South Africa until two squadrons are equipped.

FOREIGN

BELGIUM

BELGIAN AIR FORCE OFFICER TO COMMAND R.A.F. SQUADRON

An officer of the Belgian Air Force, Major Jules E. H. Kaisin, has been appointed to command No. 56 Squadron at R.A.F. Station, Waterbeach, near Cambridge The appointment has been made under the Royal Air Force/Belgian Air Force exchange scheme which has operated for several years, and under which a R.A.F. officer already commands a Meteor squadron of the Belgian Air Force. This is the first appointment of a Belgian officer as a R.A.F. squadron commander under the scheme.

DENMARK

DANISH AIR FORCE

Lieut.-General Tage Andersen has succeeded Lieut.-General C. C. J. Forslev as C.-in-C. of the Danish Air Force. He was previously Chief of Staff, and has been succeeded in that post by Colonel H. J. Pagh. The Danish Air Force comprises eight front-line fighter squadrons, six equipped with F-84G Thunderjets, one with Meteor 8s (to be re-equipped with Hunters), and one with Meteor IIs.

FRANCE

GUEPARD MAKES FIRST FLIGHT.—A new French supersonic delta-wing aeroplane, the Nord 1500 Guepard, made its first flight on 20th September in the hands of M. Turcat. It is a single-seater with a mixed power plant presumably comprising turbo-jet and rocket.

VAUTOUR O9 MAKES FIRST FLIGHT.—A 9,925 lb. thrust Avon-powered Vautour O9 all-weather fighter made its first flight from the Melun-Villaroche base on 18th October with S.N.C.A.S.O's chief test pilot, Jacques Guignard, at the controls. The production

Vautour aircraft which have been ordered by the French Air Force in all three versions, tactical support, all-weather fighter, and bomber, will be delivered from Spring, 1956. They will be powered by 7,720 lb. thrust Atar 101 E 3 jet engines.

FRENCH AIR FORCE ORDERS.—Details of French Air Force orders have been disclosed by M. Jean Crouzier, Secretary of State for Defence and the Armed Forces. He said that 150 Mystère IIs are in the course of delivery, as are 325 Mystère IVAs. An order has been placed for 150 Mystère IVBs, but delivery has not yet started. Delivery is under way on an order for 10 pre-production S.N.C.A.S.O. Vautours, while deliveries of a production order for 140 of these aircraft will start in the Spring. M. Crouzier said that 100 Fouga 170-R Magister trainers and 180 Max Holste Broussard light transports had been ordered, but these figures are not confirmed by French sources close to the aircraft industry.

AIR FORCE GETS F-84Fs.—The French Air Force has taken delivery of 40 Republic F-84F Thunderstreaks. At an official handing over ceremony at Rheims in November, 1955, the French Defence Minister, General Pierre Billotte, disclosed that France now has 47 air force squadrons assigned to N.A.T.O.

WESTERN GERMANY

NEW MESSERSCHMITT FLIES.—Successful first flights have been made by a new monoplane, the HA 200, to the designs of Messerschmitt, the German designer of war-time fame. Professor Willie Messerschmitt is in Seville and the new aircraft is Spanish-built, but has two French Turbomeca turbo-jets. The aircraft was first flown by Major Valiente, the Spanish test pilot, and it is conventional in form, with a wing span of a little over 30 ft. and a length of about 29 ft. The weight is 7,000 lb., and the maximum speed claimed is 440 m.p.h. The two engines are mounted side by side, with the jet outlets under the trailing edge of each wing root.

LUFTWAFFE PILOTS REPORT FOR TRAINING.—The first seven pilots of the future West German Air Force have reported at the United States Air Force base at Landsberg, near Munich, for instruction in training technique. All are former *Luftwaffe* pilots.

ITALY

NEW ITALIAN AIRCRAFT.—The three latest projects from Piaggio are the P.153, P.155-SAM, and the P.155-AS. The P.153 is a combat transport with a nose-mounted Double Mamba and carrying 9–12 passengers; the P.155-SAM is a twin turbo-prop amphibian, with the engines in a single nacelle above the wing, for air-sea rescue duties; and the P.155-AS is similar to the SAM, but the nacelle carries a single high-power turbo-prop plus wing-mounted turbo-jets. A maximum speed of 450 knots is claimed for the P.155-AS.

FIATS TO BUILD BRISTOL ORPHEUS ENGINE.—Bristols have recently signed an agreement with Fiats enabling the Italian firm to build the Orpheus engine under licence in Italy. The Orpheus is the key engine in various light fighter/ground attack designs and will be used to power the Fiat G-91. Thirty of this light ground attack aircraft have been ordered by the U.S. for evaluation by N.A.T.O.

JAPAN

FUJI NIKKO'S FIRST FLIGHT

Produced in competition with two other aircraft for a contract with the Japanese Air Self Defence Force, the Fuji LM-1 Nikko has been developed from the Beechcraft Model 45 Mentor trainer which Fuji Heavy Industries, Ltd. (formerly the Nakajima Aircraft Co.), is now assembling under licence from the Beech Aircraft Corp. of America. The new aircraft made its first flight on 6th June.

JORDAN

Development of Air Force

The Jordan Government has expressed the determination to develop the Royal Jordanian Air Force into an effective striking force. The idea that the Air Force should be strengthened by the formation of a jet fighter squadron is one which received the enthusiastic support of King Hussein.

Development of the R.J.A.F. began in July, 1955, when two Vampire trainers were handed over formally to the King by the M.E.A.F. The U.K. is also supplying 10 Vampire fighters. Some of these aircraft have been delivered and the remainder will be delivered this year, or as soon as the R.J.A.F. can absorb them. The Air Force is at present equipped with miscellaneous British transport and training aircraft.

THE NETHERLANDS

Fighters for The Netherlands

The Netherlands Air Force is obtaining all 56 of its North American F-86K fighters under M.D.A.P. arrangements, according to latest information from The Hague. Originally it was planned that half should be supplied through M.D.A.P. and half bought by the Dutch Government. The money saved will be used for the purchase of 48 additional Fokker-built Hawker Hunters, bringing the total of Hunters to be delivered to the Netherlands Air Force up to 204.

SPAIN

Jet Fighters for Spain

Following the delivery in June by the U.S.A.F. of two F.86F aircraft from Germany, a few more Sabre jets have been supplied to the Spanish Air Force by the Americans from their depot at Chateauroux in France. A group of Spanish Air Force personnel has been receiving maintenance instruction at Etain, an American base in France, and advice is being given by representatives of North American Aviation Inc. to Construcciones Aeronauticas S.A., the Spanish firm under contract to inspect, repair, and overhaul some of the Sabre jets before they are handed over to the Spanish Air Force. It is expected that Spain will receive sufficient of these aircraft to form a first jet fighter unit.

UNITED STATES

RF-84F Thunderflashes in Europe.—The RF-80As in the U.S. 12th Air Force in Europe are being replaced by RF-84F Thunderflashes. The first batch of RF-84Fs has arrived in Germany.

B-50 Bombers to be Converted to Tankers.—The U.S.A.F. is converting 100 B-50 bomber aircraft to three-point refuelling tankers for Tactical Air Command. The T.A.C. requires multiple point refuelling aircraft for its fighter and fighter-bomber aircraft. The KB-29 tankers at present in use are equipped with the single point flying boom system.

A Reconnaissance B-52.—Latest Stratofortress, the B-52D, weighs more than 400,000 lb., flies at more than 650 m.p.h. at a height of over 50,000 ft. Boeing-Wichita is producing the D, solely a bomber, while Seattle's production model is the B-52C, which has reconnaissance capabilities.

F-105As Tested Successfully.—The new F-105A supersonic fighter-bomber has been successfully tested at Edwards Air Force Base in the Mojave Desert, California. Announcing this, the makers, the Republic Aviation Corporation, Long Island, New York, said that it first flew on 22nd October.

X-2s First Flight.—The Bell aircraft with a rocket engine—designed to reach a speed of about 2,250 m.p.h.—has successfully completed its first powered flight.

XH-17 Completes Tests.—The world's largest single-rotor helicopter, the Hughes XH-17, has completed its final tests by carrying a 7,800-lb. trailer van. With this load, it was airborne at a height of about 20 ft. for five minutes. The company's general manager said that the test opened the way for helicopters which would carry 75 troops with combat equipment, a 155-mm. howitzer, a 2½-ton truck, a bulldozer, or even an assembled bridge.

VENEZUELA

First F.86 Sabre Delivered to the Venezuelan Air Force

The Venezuelan Air Force has taken delivery of the first of 22 F.86 Sabre aircraft purchased from the U.S.A. The cost of these aircraft is stated to be nearly £100,000 each.

YUGOSLAVIA

New Aircraft Types

Prototypes of two new aircraft have been produced in Yugoslavia. One, known as the Type 522, is an aircraft resembling the American Harvard, powered by a Pratt and Whitney engine. The other is the Kurir an A.O.P. and liaison aircraft. Powered by an inverted in-line engine, it is a high wing monoplane similar in appearance to the German Fieseler Storch. It is understood that the Type 522 is to be used as a basic training aircraft and will be produced in quantity by Yugoslav factories.

REVIEWS OF BOOKS

GENERAL

History of the Second World War. Civil Defence. By T. H. O'Brien. (H.M.S.O.) 37s. 6d.

Civil Defence of the United Kingdom during the Second World War grew into an affair of great complexity and many departments of Government were involved in it. This volume is concerned mainly with those functions which were the direct responsibility of the Air Raid Precautions (A.R.P.) Department and Fire Service Divisions of the Home Office and (once war began) of the newly established Ministry of Home Security. At the same time some account is given of those functions with which the Home Office was concerned in its capacity as the co-ordinating department for Civil Defence, but which were primarily the responsibility of other Ministries (e.g. evacuation of personnel, emergency hospital services), and which are fully covered in other volumes of the Official History.

The subject is dealt with in two parts, covering preparation and planning during the period 1924–1939, and the war years, respectively. Part I opens with a brief summary of air raids on the United Kingdom during the First World War which led to the first steps in establishing a warning system, lighting restrictions, and air raid shelters. In the period 1924–1935, planning for Civil Defence was the concern predominantly of the top strata of the Government—the Cabinet, the Committee of Imperial Defence and its sub-committees—and was conducted in secret. By 1935, the Government had decided that a measure of re-armament could no longer be delayed and that the public and in particular local authorities must be invited to play their part in A.R.P. plans and preparations. A special A.R.P. department was established in the Home Office and henceforth plans began to receive concrete applications, but the public attitude towards another war was to place a brake on progress and a strong lead by the Government was not forthcoming. It needed the Munich crisis finally to get things moving and to release the purse strings.

Part II describes in detail the response of the various passive defence measures to the air attacks of 1940 onwards and the reorganization which had to be evolved to meet new threats as they arose. Separate chapters are devoted to the Regional Commissioner organization, Fire Services, shelters, etc. The chapters dealing with the Fire Services are of particular interest, and no doubt it will come as a surprise to many readers to learn how haphazard and totally inadequate to meet major incendiary attacks was the pre-war organization, comprising as it did "over 1,600 brigades of all sorts and sizes, with independent control and leadership." The solution lay in the National Fire Service, but this did not come into being until the Summer of 1941.

The volume comprises some 700 pages and is admirably annotated and indexed. The author has resorted to the use of appendices sparingly. Perhaps a more liberal use of the appendix would have produced a more digestible text, especially in Part I which appears to emulate too closely the style and phraseology of a parliamentary white paper. History should not be dull, even if it is official.

Alps and Elephants. Hannibal's March. By Sir Gavin de Beer, F.R.S. (Geoffrey Bles.) 10s. 6d.

Hannibal's crossing of the Alps, after marching through Spain and southern France, was an astonishing feat of skill and endurance following careful preparation. This operation is also an outstanding example of strategic surprise by the use of an approach considered impracticable, a method which Napoleon repeated nearby in 1800. What is also remarkable is the fact that Hannibal succeeded in getting his 37 elephants across the Alps. Unfortunately for the Carthaginians only one survived the following Winter in 'sunny' Italy.

The actual route taken by Hannibal from the Rhone to the Po valley " has been a bone of contention for 2,000 years," which, a classical scholar recently asserted, " does not admit of a definite solution." The author quotes an epigraph from Mark Twain : " The researches of many antiquarians have already thrown much darkness on the subject, and it is probable, if they continue, that we shall soon know nothing at all." He then claims to have solved the problem and to have traced the route which, he states in his preface, " I can defend with definite evidence in some places, inferred evidence in others, and high probability in the remainder. I hope I have neglected none of the evidence." To prove his contention he seeks, among other things, the aid of modern knowledge of astronomy, seasonal flow of rivers, height of snow-line and pollen-analysis. Moreover, he knows the country.

This is an extremely interesting little boo k. Not only does the author present a most convincing argument in support of his chosen route, but in doing so has provided a good narrative of the operation from its inception until Hannibal's army reached the Po valley 25,000 strong to the complete surprise of the Romans. The Carthaginians fought two battles with local tribes during the passage of the Alps : their losses from all causes were some 20,000. There are several landscape sketches in the text and a small map of the Alps which the Carthaginians crossed. The final chapter includes a potted biography of Hannibal, and one of the appendices discusses whether he had African or Indian elephants.

Bamboo and Bushido. By A. G. Allbury. (Robert Hale.) 12s. 6d.

Others have written of the frightful suffering undergone by those who became prisoners of war of the Japanese, and the Siam–Burma railway is notorious. Even so, Mr. Allbury's simple and moving narrative demands attention. As he says at the end of one chapter, " I feel there is no virtue in forgetfulness, nor yet in ignorance. What has been, has been ; let those whose memories are short think back, and those whose knowledge is incomplete learn something of the horrors of war."

The author was a driver in a regiment of the 18th Division artillery and so was unlucky enough to reach Singapore when the campaign was already lost. He spent a few days taking up ammunition to the battery positions : then came surrender. His tragedy had begun. The labour camps of Singapore, where British prisoners suffered such treatment as bred in them " an implacable hatred of everything Japanese," were bad enough. When our men were moved north to work on the railway they touched the depths of misery and degradation.

The railway line was to run through miles of jungle, mountain, and swamp : the tools were picks and shovels and rusty axes. The prisoners, half-naked and half-starved, afflicted by malaria, beri-beri, dysentery—almost every kind of tropical disease—were worked unceasingly through monsoon rains and blistering heat. And as they did so they sickened and died. Cholera was the crowning horror. British medical officers did what they could in the almost total absence of medical supplies ; a hospital was a " pit of slowly decaying manhood."

Mr. Allbury tells us that it was not only the physical brutality—the Korean guards were brutish indeed—but the mental distress which sapped men's powers and will. To be regarded as slaves—white coolies to be worked to death—broke many hearts. And yet there was a spirit which survived anything the Japanese could do. The work was sabotaged even as it was being done. Embankments were faked and bolstered up with rotting wood, base-piles of bridges were set in a mixture which had none of the virtues of the concrete it was supposed to be. And throughout the long drawn out ordeal the prisoners were pitiful to each other and the ties of comradeship were preserved. The writer suffered severely from malaria and other ills, but in some ways appears to have been more fortunate than the majority of his fellows. His survival bears testimony to his own vigorous manhood and a moral fortitude which was proof against despair.

The crowning infamy came when 1,350 prisoners of war had been embarked upon a Japanese freighter for the voyage to Japan. The ship sailed in convoy, but in the South China Sea she was torpedoed by an Allied submarine, and the Japanese with plenty of other craft at hand, left the prisoners to perish. Those who were able to get away on rafts drifted for days while most of them died from exhaustion or drowning. Allied submarines were only able to pick up 149 souls, and the last of these was Mr. Allbury. He was rescued as the search was ending by the U.S.S. *Barb*, after he had been adrift for six days and nights without food or water. With this story of the sea, told with a stark simplicity which a practised writer could hardly better, comes the happy ending. It is good to know that Mr. Allbury, safely restored to his wife and family, has recovered and is now in regular work in England.

The Big Lie. By John Baker White. (Evans.) 15s.

Readers who are seeking a war book which is out of the ordinary will do well to read this book. It is an account of a very important, yet little known, branch of intelligence work, the deliberate deception of the enemy by elaborately planned ' leg-pulls.'

The author, while serving in M.I. at the War Office, was detailed, early in 1940, to take charge of quite a new activity—the fabrication of broadcast scripts to be used upon personnel of the German armed forces. From this beginning he graduated to still more ambitious psychological operations. Several chapters give descriptions of the better known and highly successful tricks of this nature which were played upon the High Command.

Among these are included the strange story of Major William Martin, " the man who never was," and some of the inner history of the Darlan affair. Many lesser known stories come into the collection, including an interesting study of the enemy technique for similar tricks of deception, as exemplified in their surprise offensive in the Ardennes. That unusual and sinister character, Otto Skorzeny, figures in the story.

But this book is not a mere thriller. Though the author has included a sufficient quantity of ' cloak and dagger stuff ' to maintain the human interest, his real purpose is to show us the art of fabricating these ' big lies ' rather than the technique of presenting them to the enemy. One needs to read this book to realize how difficult it is to think of a really good lie and then to build up the supporting evidence.

Yet it is far from being the story of a ' chair-borne ' staff officer, hatching schemes for others to put into effect. Colonel Baker White travelled a great deal himself, and gives us exhilarating insights into the night life of Cairo, Beirut, and other hotbeds of war-time espionage. He touches lightly on these adventures in a vein of real humour, but it is easy to see that considerable risks were inseparable from his explorations of some of these haunts. Apart from that aspect of his wanderings, perhaps the worst part about his job—at any rate for disillusioned old ' roués ' like the reviewer—would have been the need to spend many hours of good sleeping-time in these boring and third-rate night clubs !

Coming, as it does, from such an expert on communism as the author, his remark upon the Kremlin's anti-British activities in Cairo, as long ago as 1943, seems well worth study by our appropriate authorities—specially in view of present Soviet meddling in Egypt.

Both as a serious study and for lighter reading this book should appeal to a wide public. Its style is easily readable and the subject-matter well worth reading. It has many illustrations and a good index.

Brassey's Annual. The Armed Forces Year-Book. 1955. Edited by Rear-Admiral H. G. Thursfield. (Clowes.) 63s.

Brassey's Annual is now in its 66th year of publication. It comprises 30 chapters and the usual Reference Section ; the number of chapters is four less than in the previous year, but this slight decrease in the contents list does not impair the ordered balance of the book as a whole.

STRATEGIC COMMANDOS

The politico-military careers of Gonzalo Fernandez de Cordoba, Shaka Zulu and Otto Skorzeny provide outstanding examples of unorthodoxy brought to the pitch of genius in approach to warfare. Their lives, their theories of battle and their fortunes in action are fully chronicled—to the evident satisfaction of authoritative critics—in the following books

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LONGMANS

It is not possible in the space available to review in detail all these chapters, which cover a wide range of subjects. Numerical statistics, taken from official sources, are sometimes quoted to support the arguments of the writer of an article, but the conclusions drawn may not always find universal acceptance because other relevant factors have not been fully taken into account.

Changes in the political sphere, which may affect the future provision for the armed forces, are apt to be more rapid than can be kept pace with in an article which is six months out of date by the time it appears in print. The gradual but no less certain emergence of nuclear warfare, in all its possibilities, continues to provide unending speculation among all governments, whether of the East or of the West, and several of the chapters are written round this theme.

The vexed question of who is to control air warfare over the sea, and by what material means this can best be effected, is still a matter of much controversy. Each method has its own protagonists, who, though they differ in the details, agree generally on what is practical and necessary *in the immediate future*. The proposal by Admiral Hughes-Hallett (Chapter XIV) to merge the Navy and the Air Force into one Service is, however, easier said than done; nor is it clear *why* it should be done. Co-operation between the three fighting Services is now well-established at both high and medium levels, such as the I.D.C., the J.S.S.C., etc.; moreover, an attempt to merge the training required for separate Services into one would, as likely as not, result in 'jacks of all trades and masters of none.'

As is usual in a year-book, several of the chapters are on subjects of a recurring nature and these themes are continued, bringing the reader as up-to-date as possible. Developments in the international sphere are well covered in Chapter III by Mr. Jules Menken, who resumes his analysis of the Communist Powers.

The N.A.T.O. maritime exercises in both the Mediterranean and the eastern Atlantic, which took place in 1954, are described by Admiral Horan (Chapter XXIX). In the foreword to this volume is a reproduction of the broadcast by H.R.H. the Duke of Edinburgh to the British Mediterranean Fleet at the conclusion of the N.A.T.O. sea exercises which he witnessed in March, 1955. In it he stressed the paramount importance of inter-Service national contributions. His remarks are very much to the point.

In a survey of the organization of Civil Defence (Chapter VI), Mr. Ian Harvey points out that the Fourth Arm is not merely a civilian organization which is largely voluntary, but that it is essential for it to be linked up with military home defence plans; also that the one cannot function properly without the other.

Some of the chapters treat of a single subject, such as "The Role of the Aircraft Carrier" (Chapter VII)—in which the author once more disables the fallacy of the alleged vulnerability of the carrier *vis-a-vis* the shore-based airfield; "Operations by Regular Troops against a Guerilla Enemy" (Chapter XXVIII), etc. Others are more comprehensive and embrace all three Services as well as the political aspects, both past and present. The hard struggle by British mercantile shipping to survive in the face of the subsidized shipping of foreign countries and that of air transport is shown by Sir Archibald Hurd in Chapter XII. This is a subject in which he is an acknowledged expert, and his plea for improving this state of affairs is most timely.

The Reference Section at the end of the book contains the usual Command Papers—Statement on Defence, the Service Estimates, and also The Supply of Military Aircraft.

The excellence of the illustrations continues, and as a combined Services year-book *Brassey's Annual* still maintains its position as 'top of the class.'

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Red Shadow Over Malaya. By Brigadier M. C. A. Henniker, C.B.E., D.S.O., M.C. (Blackwood.) 18s.

This informative, outspoken, and entertaining book is by a soldier of considerable distinction who is also a writer of repute. He presents a well-balanced and good humoured survey of the origins and character of the communist menace in Malaya, and of the policy and means by which we are striving to suppress it.

For three years Brigadier Henniker commanded the 63rd Gurkha Brigade which, besides Gurkhas, included a succession of British battalions and the Fijians—all first-class troops. Speaking of our National Service element he says " there is not the slightest doubt about the quality of our young men," but notes that the continual change of personnel involves a great strain. A British battalion in Malaya ' turns over ' 2,000 men in the course of its three years tour of duty ; and we are reminded that very few educational establishments in England have so great an output and that " they do not have to fight bandits at the same time."

Fighting bandits is a specialized form of warfare in which our men soon become adept. They learn how to move and live and fight in the jungle. The bandits, officially " communist terrorists," wage a gangster war of brutal murder, ambushes, raids to capture arms and ammunition, protection ' rackets ' by which they obtain food, money, and information from the inhabitants, and anti-British propaganda. They must either be killed or induced to surrender, but their elimination is not merely a question of military operations. There are many ' fellow travellers ' and waverers, and drastic measures causing the people undue hardship or privation would drive large numbers over to the communist side. The Army, in short, is acting in aid of the Civil Power to restore law and order.

As a good commander Brigadier Henniker often saw for himself how his patrols, Gurkha, British, and Fijian, worked in the jungle ; and as a senior officer he sat in at the meetings of the higher authority which directed policy and sanctioned military operations. This authority included the heads of the civil administration, the police, and the military, constituting a rather cumbrous committee which could only work by compromise and good will. Fortunately, there appears to be no lack of competent civil administrators and police commissioners. The Special Branch, responsible for intelligence, is of particular importance, and attention may be called to a plate showing the communist organization in Negri Sembilan. It will be news to many of us that the terrorists are so highly organized.

The Brigadier's service was in southern Malaya, in the states of Negri Sembilan, Selangor, and Johore, and in the British settlement of Malacca. Each state government had a British adviser and the committee system worked well ; but all worked better throughout Malaya after General Templer arrived upon the scene. The machine was already there : the impetus and energy imparted to it by ' the man ' made all the difference.

Brigadier Henniker has no doubt that our ultimate object must be to convince the various races of Malaya that communism can offer them no such advantages as an enlightened democratic government. " The ailment will be cured by political medicine, not by military surgery." Meanwhile, military surgery—with all its modern instruments such as radio, armoured cars, artillery, bombing, and ' loud-mouthed ' aircraft and helicopters—is indispensable. The political medicine works in a more subtle way, often by trial and error. Brigadier Henniker left Malaya at the end of 1954, and since then there have been some changes in the prescription.

Spanish Guns and Pistols. By W. Keith Neal. (Bell.) 42s.

There is an extraordinary fascination in the close study of ancient firearms, and in this major contribution Mr. Keith Neal has produced from the depth of his very wide acquaintance a handsome, well-written book on Spanish guns and pistols. There are

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by SIDNEY BUTTERWORTH

This novel, set in the remote Kaladan Valley jungles of the Arakan, Burma, where the 81st (West African) Division fought, is a vivid, powerful and authentic account of the fierce, burning terrain in which "war could spring out from behind a tree." This is an exceptional novel with an unusual setting and theme, and as exciting a climax as a thriller. 10s. 6d.

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100 clear and beautiful photographs, a frontispiece, and plates of marks and countermarks, each infused with style.

The period covered is that from the introduction into Spain by Charles V of the two Marquate brothers from Augsburg until the mid-XIXth Century. Types of the miquelet or snap-lock, which endured almost unchanged for some 200 years, are particularly well described and illustrated ; two locks, one of 1705 by Nicolás Bis and another of 1724 by Diego Esquibel, are demonstrated in 11 illuminating photographs. Technical details are carefully, clearly, and almost lovingly given, as is natural when they are handled by a Master of the Worshipful Company of Gunmakers and an expert shot engaged in describing weapons from his own private collection. The productions of the gunmakers of both Madrid and Ripoll are considered.

The weapons themselves are of extraordinary beauty. The high quality of the iron ore from Spanish mines was the foundation of their excellence, but these productions show qualities of balance, perfect proportion, and fitness for purpose always associated with high art. Their stocks were carved of walnut or fruit-wood, their foresights made of vivid South American gold ; pancovers, side-plates, cocks, and mounts were of chiselled or engraved steel or of silver, often inlaid or backed with gold, and frequently embellished with the shapes of monsters, serpents, hunting-dogs, or hares ; butts were masked with beaten silver and ramrods were silver-tipped ; inlaid gold initials showed their owners' pride of possession ; touch-holes and even the insides of some pans were lined with gold. Barrels were usually fire-blued, a process involving up to twenty-four hours of careful heating, rubbing, and turning at even temperature throughout. It is no wonder that these superb barrels were frequently remounted even 100 years after manufacture.

Separate chapters are devoted to the miquelet lock, Spanish guns in general, pistols, guns of divergent form, and the percussion period. There is also an account of a treatise written in 1644 on guns and shooting by Alonzo Martínez de Espinar, with a translation of Isidro Solér's " Historical Account of the Gunmakers of Madrid " in 1795.

The whole book shows with what pride and skill Spanish craftsmen laboured for perfection.

NAVAL

Above and Under Hatches. An autobiography, 1775–1814. By James Anthony Gardner, Commander, R.N. Edited by Christopher Lloyd. (Batchworth Press.) 16s.

This is an autobiography of a naval officer in the days of Rodney and Nelson. The author did not take part in any of the celebrated naval battles of this period but he saw considerable sea service. He was a keen and shrewd observer of all that went on and seems to have been a student of the literature of Ancient Greece. He was a keen officer and undoubtedly was fond of the Service. That he never attained high rank seems to have been odd, but he was very 'choosey' in what appointments he took up and this may have gone against him.

In plain narrative he has certainly given a very good and readable account of all that went on around him. His criticisms of his senior officers are sometimes bitter, but he has much good to say for those whom he considered to be efficient as seamen although they may have been hectoring bullies.

This book does not in any way deal with either strategy or tactics, but it does give what is undoubtedly a very good account of what went on " above and under hatches " in all the ships the author served in. Reading it carefully one can see at once how little the principles of warfare at sea have altered even to this day. There are references to distant cover and close escort for the convoys at sea. The long periods at sea on these duties without falling in with an enemy can be well imagined. Again the names of the ships remind one at once of those which fought both in the 1914–18 and 1939–45 Wars.

It is in his description of what went on on board which at once shows the difference between the Navy of his day and the Navy as it is at present. He well describes the

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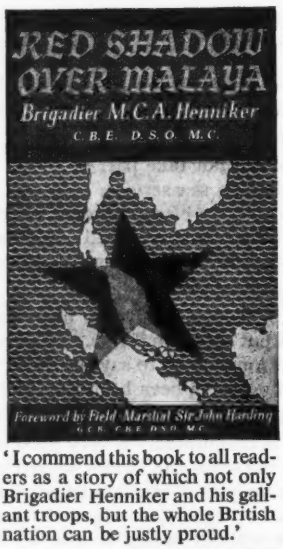

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harsh and even brutal discipline which was his lot to endure. Almost unintentionally it appears, he describes the perils that were always at hand in the days of sail and how good seamanship saved the day. Some of his descriptions of the storms that were encountered suffer from what may be termed understatement. What does strike a modern reader very forcibly are his tales of the boatwork that was undertaken in all weathers. Fancy sailing a launch full of stores from Portsmouth to Lymington in a westerly gale with the wind against the tide—anyone who knows the Solent will realize what these conditions mean in the form of a short choppy sea. Again the idea of taking a boat under oars from Yarmouth, I.O.W., to Cowes and then on to Ryde was all part of the day's work.

His mother was Irish and no doubt this accounts for the author's sense of humour and his respect for the sailors who hailed from that 'distressful country'. Incidentally, the wit, or what went for it, in those days was very different from that prevalent today.

Taken as a whole this book is really a contribution to naval history although it was not written as such. In addition, to those who know the Navy it is 'a rattling good yarn.'

The Golden Horseshoe. By Terence Robertson. (Evans.) 12s. 6d.

The Battle of the Atlantic threw up outstanding men on both sides, a great many of them with valid claims to be remembered in the pages of naval history. One of those on the German side with such a claim was Otto Kretschmer, captain of *U.*99, a gallant and resourceful submarine captain with a tremendous record of success.

This book tells his story. His boat was eventually sunk by H.M.S. *Walker* during an attack on an Atlantic convoy in 1941, and Kretschmer spent the remaining years of the war as a prisoner in Britain and Canada. Much of the book tells of his experiences in this capacity.

It is an interesting, and indeed an exciting, story. There are not many books yet published in this Country of the war experiences of the other side, and for that reason alone it is worth some study. The type of warfare in which Kretschmer was engaged is always unsavoury, no matter by which side it is carried out, but such evidence as is available points to the fact that Kretschmer was as honourable in victory as he was gallant in defeat. That he was a remarkable man is evident as one reads these pages, a keen and acute brain leading him on to experiment with new forms of U-boat attack at sea and to organize an espionage system from the fastnesses of his prisoner of war camp. Yet it is difficult fully to estimate the real extent of his skill as a U-boat captain, for his startling successes were achieved while the escort forces were stretched to their limit. This is a question which this book only partially answers, for there is little tactical detail to back up the story, and without it one cannot form an adequate judgment. It would have been a more useful book, and perhaps even more interesting than it already is, if the convoy battles had been treated in rather more detail, and especially illustrated with track charts. Then, indeed, would the figure of Kretschmer have fully emerged.

Gunboat 658. By L. C. Reynolds, D.S.C. (Kimber.) 16s.

This is the story of a motor gunboat which operated in the Mediterranean from the fall of Tunisia in 1943 to the German surrender in 1945. It is graphically told by a young R.N.V.(S).R. officer who, after serving as an ordinary seaman in a cruiser, joined the boat in 1943 as a midshipman at the age of 19 and stayed in her for the remainder of the war, first as navigating officer, then as first lieutenant and finally, from December, 1944, as commanding officer.

Commissioned at Brixham in March, 1943, with a crew of three officers and 30 men, *M.G.B.*658 worked up at Milford Haven before setting out for Gibraltar on 30th April in a convoy of coastal craft escorted by armed trawlers. In the Bay she attacked a shadowing Focke-Wulf. Her fire was ineffective, but for her the war had begun in earnest. A motor torpedo boat in the same convoy picked up survivors of two enemy submarines, *U.*659 and *U.*439, which had sunk after colliding on the surface while attacking the convoy in 43° 32′ N. 13° 20′ W. on the night of 3rd–4th May.

Early in June, *M.G.B.*658's flotilla, the 20th, arrived at Malta and from there it carried out a number of routine patrols. On one the author reached his 20th birthday and was automatically promoted acting sub-lieutenant, and on another *M.G.Bs.*640 and 658 bombarded Avola Marina, 20 miles south of Syracuse. The flotilla's next operation was " Husky," the invasion of Sicily, which opened on 10th July. For 19 days *M.G.B.*658 came under heavy air attack during which she shot down two enemy aircraft; her first kills. Finally, she took part in a bombardment of Taormina and then, on 28th July, returned to Malta, where she became the subject of a Special Order of the Day for her part in the invasion. In October the author was appointed her first lieutenant. A few days later she fought her first surface action, in the Piombino Channel, sinking two hostile flakships and also, by tragic error, her consort, *M.T.B.*636. After carrying out a ' cloak and dagger ' operation which ended in a fiasco and spending Christmas, 1943, refitting at Malta, *M.G.B.*658 was transferred to the 57th MTB/MGB Flotilla. During the next twelve months the flotilla carried out a number of successful operations and surface actions, too numerous to describe in a short review. Christmas, 1944, found it again at Malta refitting with the author, newly promoted a lieutenant, in command of *M.G.B.*658. It was Easter, 1945, before the flotilla returned to the Adriatic and soon the war was over. It was not, however, the end of *M.G.B.*658 : for another three months she continued to work in the Adriatic and then returned to Malta. Finally, on 27th August, she hauled down her White Ensign for the last time. Her end was now at hand. Sold to Egypt, she was one of three boats that foundered in a gale on their way east.

Even though all the author's geese are swans, his book is interesting and instructive. It is well written, bound, and printed, and contains a generous selection of illustrations, maps, and drawings, but a few more dates and an index would be welcome additions.

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Illustrious. By Kenneth Poolman. (Kimber.) 16s.

This book is the war biography of one of the best known ships in the Navy during the last war. H.M.S. *Illustrious* was one of the six large fleet carriers built or building when war was declared in 1939. It was from her decks that the Swordfish squadrons were launched, on 11th November, 1940, for the Fleet Air Arm attack on Taranto, and later she was to do great things in the Indian Ocean and the Pacific against the Japanese. Throughout the war there was no lack of incident in her life, and it is on this wealth of material that Mr. Poolman has based his book.

It is, perhaps, not the sort of book to read if the object is to obtain some idea of the air war carried out by the Navy. There is little background against which to place the exploits described here; no attempt to assess the strategical implications of the various operations against the developing plan of the war as a whole. This is, instead, a chatty, personal book, written in the now fashionable manner of attempting to write history with the imagined conversations of those who played a part in it, and usually a minor part at that. Yet, nevertheless, the book does produce an intimate picture of life in a big ship under the stress of war, though it is a picture whose accuracy is apt occasionally to be somewhat suspect, since it is based to some extent on personal recollections and invented conversation. Although the book adds little or nothing to our knowledge of the war at sea, it does make bright and amusing reading for the lighter moments.

An Introduction to Naval Court-martial Procedure. By Captain A. D. Duckworth, R.N. (Retd.) and Commander R. R. S. Fisher, D.S.C., R.N. (Hiorns and Miller.) 15s.

This little book of 110 pages is intended to be no more than an introduction to the study of naval court-martial procedure. The whole subject is, of course, fully set out in the various official Admiralty publications relating to courts-martial and disciplinary courts, but those text books are, of necessity and intention, not worded with a view to providing merely simple elementary instruction. They tell the reader what should or should not be done in order to comply with legal requirements, but the more personal and conversational aspect of the subject—as would be interpolated in a lecture—is outside their scope. The beginner, therefore, sometimes cannot see the wood for the trees.

Generally speaking, until comparatively recently, this subject seldom received the attention it merited from the average junior executive officer, possibly because no attempt was made to ensure that he was ever instructed in its many complications. The result was that it was not until later, when he was first called upon to sit as a member of a court, that he realized his ignorance. The only officers who received prior instruction in this matter were the younger officers of the Accountant Branch (as they were then called) who attended secretarial courses at a home port.

In the Army, the young officer has to attend a certain number of courts-martial on duty and under instruction (not merely as a spectator), when he takes the oath and remains present during the whole of the proceedings, even when the court is 'cleared.' There would seem to be no insuperable difficulty in adopting a similar procedure for the naval officer.

This book was originally published 20 years ago and ran through four editions fulfilling a much-felt want. In 1954, several changes in court-martial procedure, which were recommended by the Pilcher Committee, were brought about and others still await incorporation in the Naval Discipline Act. A fifth and more comprehensive edition has now been produced, Commander Fisher, who is also a barrister-at-law, being co-opted as joint author. The whole of the proceedings from first to last, as well as the duties of the various officers of the court, are described in simple language; there are also specimens of all the documents necessary in a court-martial, how they should be drawn up and the manner in which witnesses should be examined. The present edition should prove no less successful than its predecessors.

The contents list and the black letter sectional headings show where to find the required information, which renders the absence of the usual index a matter of no account. The tables and skeleton diagrams put the essentials clearly.

The authors are to be congratulated on the manner in which a rather complicated subject has been treated. As the dust cover rightly states, "A book which should be in the possession of every naval officer."

The Journals of Captain James Cook. Volume I : The Voyage of the *Endeavour*, 1768–1771. Edited by J. C. Beaglehole. (Cambridge University Press for the Hakluyt Society.) 80s.

The first volume of Dr. Beaglehole's monumental work in editing the journals of Britain's greatest explorer has now been published by the Hakluyt Society. It is an event which has been long awaited by scholars, bringing as it does the first full and authentic publication of Cook's own records of his three great voyages. We shall have to wait, it is true, for the appearance in print of the journals of the second and third voyages, but this first volume is a magnificent earnest of what is to follow.

A first quick glance makes clear two qualities which stand out forcefully, the erudition of Dr. Beaglehole himself in his masterly general introduction and the admirable work of the printers, Messrs. Robert MacLehose and Co., in what must have been a work that fairly bristled with difficulties. It is difficult to bestow too much praise in this respect, for a complicated journal is made easy and pleasant to read.

Of the journal itself, it is enough to say that it is of extreme importance to the scholar and student, and also of extreme interest to the general reader. And inevitably it brings one back on every page to Dr. Beaglehole, for the evidence of his meticulous editing is

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This is an outstanding addition to the bibliography of the great Duke.

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JAMES BARRIE

apparent throughout. This is, indeed, a noble and successful venture, and all who have been concerned with it deserve the grateful thanks of those of us who will read and benefit from the results of their labours.

The Naval Officer's Sword. By Captain Henry T. A. Bosanquet, C.V.O., R.N., F.S.A. (H.M.S.O.) 21s.

Captain Bosanquet was asked by the late Sir Geoffrey Callender, some years ago, to undertake the task of cataloguing the collection of naval swords in the National Maritime Museum, tracing their history and proving their authenticity when accredited to particular individuals. The result of what proved to be a long and intricate duty has now been published.

Few people can have a deeper knowledge of this subject than Captain Bosanquet, and the evidence of that fact is to be found in the pages of this book. His work bears the unmistakable stamp of authority, and the various descriptions of the 105 weapons included in his catalogue bear witness to the exactitude of his work and the pains to which he has been to verify every possible fact.

To the specialist this book will prove to be invaluable, not merely on account of the catalogue of the museum exhibits, but also for the lists of London and provincial sword-smiths and sword-cutlers. They will welcome, too, Captain Bosanquet's excellent introduction, which summarizes the history of the naval officer's sword in admirable fashion.

"Up Funnel, Down Screw!" By Commander Geoffrey Penn. (Hollis and Carter.) 16s.

The general run of the engineer question which so vexed the Navy during the first hundred years of steam is well known to most naval officers, but this seems to be the first time it has been set out clearly and comprehensively. In his well-written book, evidently the fruit of thorough research, Commander Penn tells the story from its beginnings in the paddle steamers of the 1820s to the present day.

The question was, of course, what should be the status of the officers responsible for the motive power of ships as compared with those who commanded, or aspired to command, ships, squadrons, and fleets. In the early days the social aspects were the most troublesome. The caste system tended to be rigid and the early engineers were mechanics rather than officers. As a result, acceptance of the need for engineers who were officers in every sense of the word was of slower growth than was warranted by the steady rise in importance of machinery in naval affairs. Judgment, too, was sometimes clouded by too ritualistic a use of the word 'seamanship' and the prerogative it implied—for if seamanship is the art of enabling ships to fulfil the requirements of strategy and tactics despite the adversities of wind and waves, the work of the engineers has no small part in it. But there was gradual realization that substantial changes were needed, and this, with much urging from the engineers that their importance should be more clearly acknowledged, led logically, as it seemed, to the amalgamation introduced by the Selborne-Fisher scheme in 1902 and strengthened by the Cawdor memorandum three years later.

There were, however, faults in this logic, as experience soon showed, and modifications of the scheme again separated the two branches. Perhaps the most essential difference between the engineer and he who commands ships and controls strategy and tactics is that the former's task in war, though much heightened in danger and intensity, remains substantially the same as in peace; whereas for the commander it is fundamentally altered once he is at grips with a flesh-and-blood enemy against whom he must pit his wits and his courage. For this reason alone it is best that their background of experience and outlook should be different; and for this reason, also, no true parallel can be drawn with the relations of technicians and executives in industry. It may well be that the importance of naval engineers is still increasing, as is implied by Vice-Admiral Mason in his foreword

to this book—an importance not invalidated by their having to take orders from those who control the operations of war. Evidently there is much need of mutual confidence. This confidence has usually been forthcoming; but to anyone who wishes to clear his mind on the background of this subject, Commander Penn's book, besides providing some entertaining reading on the early days of steam, will be found to be of great value.

ARMY

Blamey. By John Hetherington. (F. W. Cheshire, Melbourne.) 16s.

This is the first biography of Field-Marshal Sir Thomas Blamey to appear. The author, a well-known journalist, has recently compiled an account in the series of Australian official war histories of the part played by the Royal Australian Air Force, and the work involved in its production must have made him fully acquainted with the part played by Australia and by her Commander-in-Chief in the 1939–45 War.

Nevertheless, he has set himself the task of portraying the man rather than the soldier, with the result that the picture in both spheres remains blurred. The fact is that long after Blamey, the man, has been forgotten, his impact on the development of the military forces of Australia will be remembered. He "lacked the golden touch in human relationship."

Blamey was born at Wagga Wagga in 1884 and having obtained a Regular commission in the Australian Army in 1906, passed via the Quetta Staff College eventually to become Sir John Monash's right hand man in the Australian Corps at the end of the 1914–18 War. Though lacking in experience of command in the field, he had by 1919, at the age of 35, proved himself to be a brilliant staff officer and an outstanding organizer.

The Vengeance of Private Pooley

BY CYRIL JOLLY

The true story of how 99 soldiers of the Royal Norfolk Regiment were taken prisoner and massacred by the Germans in 1940, except for two of them who escaped death and lived to see the officer responsible, S.S. Lt.-Colonel Fritz Knoechlein, brought to trial and hanged, even though at first the British authorities refused to believe Private Pooley's account of the crime. 15s.

HEINEMANN

On his return to Australia and apparently seeing little future in his chosen profession he accepted, in 1925, the post of Chief Commissioner of Police in the State of Victoria. Forced to resign from this appointment in 1936, he remained virtually unemployed and forgotten till 1939. More than half this book is devoted to his subsequent career in the 1939–45 War. In 1939, the confused state of public thought in regard to military affairs generally has been told in the Australian official histories ; even so, his recall and appointment to command the 6th Australian Division, after 14 years in the ' wilderness,' came as a surprise to many of his compatriots. By 1945, he was almost a military dictator in his own country.

During his years in control of the police force, several injudicious acts had invited comment from a generally hostile press and, during the latter part of his life, the course of action he chose to pursue often came in for severe criticism. Though he seems to have had an abnormal capacity for absorbing such criticism, he could not help but be affected by its cumulative effect and, as the years passed and his power grew, he became more egotistical and ruthless. Believing that half measures do not succeed in war, he was unable to reach any compromise. So, if he retained the devotion of some brilliant subordinates, he had no intimates, few real friends, and many enemies.

All the incidents in which he became involved are paraded and examined in this book, but the evidence is sometimes not well presented, with the result that the conclusions which the author means to convey are not always acceptable. Too many stories are included showing his impact on his juniors, few contain the views of his superiors, and a more careful selection might have been made to emphasize his qualities as a man or as a commander.

If he had few of those characteristics which might have endeared him as a man, he had many which go to make up the successful soldier. Lord Wavell described him as " probably the best soldier we had in the Middle East—positive, firm, and a very successful commander," but his service in the 1914–18 War seems to have left him with a suspicion of " the union of British generals " and his period in the police had narrowed his outlook. His insistence on the relief of the Tobruk garrison shows that he could never have reached world stature in the way that Smuts did. He seems to have been blessed with great physical strength, unbounded energy, and a phenomenal memory, but the troops he led showed indifference to him and " he played his cards too close to his chest." If the story of his final promotion seems to us a little undignified, there can be no doubt that Blamey is the greatest soldier which Australia has so far produced to lead her armies in war.

A Brief Study of the Burma Campaign : 1943-1945. By Captain S. G. Chaphekar, A.I.R.O. (Maharashtra Militarisation Board, Poona.) Rs. 4.

This ' study ' has been written for the officers of the Indian Army who, the author suggests, must " take seriously to their profession and study the art of war." Sound advice ; and this book provides a narrative of a most interesting and instructive campaign in which the old Indian Army served with much distinction against a fanatically brave enemy.

The first two chapters give the background, the reasons for the Japanese attack on Burma, and discuss why the Allies were determined to regain possession of the country as soon as possible. The difficulties due to terrain and climate which had to be overcome are emphasized. The operations to clear northern Burma and those in the Arakan are dealt with in separate chapters, as are the Japanese ' march on Delhi ' in March, 1944, and the defence of Kohima and Imphal which disrupted the enemy's offensive.

Four chapters describe our final offensive, at the end of which the Japanese Army was probably more thoroughly beaten than anywhere else. The quick thrust to Meiktila, south of Mandalay, in February, 1945, afterwards termed the ' master stroke ' by the enemy, was well executed. It is an operation which should be studied carefully and

objectively in detail. A final chapter discusses various subjects in connection with the campaign among which are several lessons suggested by the author, who also stresses the essity for sound administration.

The narratives and background are well presented, though there is a certain amount of repetition. There are seven useful sketch-maps at the end of the book and an outline map of Burma is printed on the cover. A foreword is contributed by Lieut.-General S. M. Shrinagesh, G.O.C., Southern Command, who points out that this is " the first book of its kind on the subject written by an Indian."

Administration in the Burma Campaign. By Major B. N. Majumdar, Indian Army Service Corps. (Clifton and Co., Delhi.) 5s.

The aim of this little book is to arouse interest in the administrative problems of the Burma campaign. " It is essential," the author writes, " that we study the lessons learned, because it is in this type of country the Indian Army may be called upon to operate in a future war." The book is well arranged : unfortunately, however, the narrative is marred by much repetition.

The first four chapters are devoted to various factors affecting administration and the withdrawal to India in 1942. The main lesson drawn is that the means of maintenance for a force must be available at the outset. That administrative measures must not be left to chance is true, but the author does not stress the fact that it is the responsibility of the politicians to provide the necessary funds. Moreover, in a global war the ' means ' available must be allocated in accordance with the relative importance of a theatre of war at a given time.

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Two chapters deal with the 'build-up,' return, and final victory. Success was made possible by air supply, but it had to be supplemented by all other types of transport, animal and mechanical. In his final chapter the author sums up and makes some suggestions; he rightly condemns the Japanese administrative arrangements for their invasion of India. Readers of this book may not agree with all the views expressed, but if they reflect on them the aim of stimulating interest will have been achieved.

Lion Rampant. By Robert Woollcombe. (Chatto and Windus.) 12s. 6d.

Having myself had the honour of serving in the 15th (Scottish) Division, and of taking part in their battle for the River Odon, I may perhaps be unduly favourably biased! To me this book has been a joy to read from beginning to end. However, knowing the dangers of partiality which beset me as a reviewer, I must be specially careful to tackle this job with the open mind of a general reader, who may have no particular ties with that fine fighting division or with the men and events described.

From one point of view my inside knowledge is perhaps an advantage, for it has enabled me to judge the author's ability as a portrayer of men and narrator of events. Though in many cases he has mentioned no names, it is easy indeed to identify from his descriptions many of the division's outstanding characters—not only the exalted ones, such as "the tallest general in the British Army" with his "outsize cromach, itself the height of ordinary men," or the brigadier with his "well-stocked figure," but other less prominent members of the division too. The author's descriptive ability covers battle scenes also, for his detailed story of our fight for the "Scottish Corridor," starting from Bretteville the Proud and thrusting through Cheux, is a masterpiece of plain unvarnished accuracy and attention to detail. With one trivial exception perhaps—should not "St. Manvieu" read "St. Mauvieu"?

Undoubtedly much of this book will be of special interest to ex-members of the 15th (Scottish), and still more so to those who have served in The King's Own Scottish Borderers. But the story is so alike (in some ways and yet so different in others) to the experiences of other infantry divisions, units, and individual soldiers, that it will have a wide appeal to all who enjoy a well-told tale of good hard infantry fighting and all the other happenings—grave and gay—which befall infantry soldiers on active service.

It is not just a story of one man's war. Nor is it a regimental, still less a divisional, history. Yet it has the good points of all three. It starts as a history of a platoon and ends as the history of a company, but it gives a clear view of the divisional picture on one side and of the lives and deaths of individual soldiers on the other.

It is particularly gratifying to read the author's testimony to the friendly liaison between artillery and infantry which prevailed in that division, and his recognition of several occasions when support was specially effective.

The addition of an index would have been a great help to readers.

Panzer Battles, 1939-1945: A Study of the Employment of Armour in the Second World War. By Major-General F. W. von Mellenthin. (Cassel.) 36s.

This is an exceptionally interesting and instructive book, and a worthy companion to Guderian's *Panzer Leader*. Its author, born of an old Silesian family in 1904, enlisted as a cavalry trooper in 1924, and four years later was promoted a lieutenant. Throughout the last war he served on the General Staff in Poland, France, the Balkans, North Africa, and Russia, and except for the German invasions of France and Russia, he was closely connected with tank operations in all these theatres. Out of the 353 pages of his book, 88 and 138 are devoted respectively to the North African and Russian campaigns, and as the former are well-known to British readers, it is the latter which are likely to interest them most.

In November, 1942, when the Stalingrad campaign was bogging down, von Mellenthin became Chief of General Staff to the 48th Panzer Corps; later he held a similar appointment in the Fourth Panzer Army, to remain with it until September, 1944. Therefore his experiences in Russia were considerable, and he records them modestly and objectively, and, what is refreshing, without a whiff of propaganda or recrimination.

His views on Russian tactics and the Russian soldier are of particular interest. "Practically every Russian attack," he writes, "was preceded by large scale infiltrations, by an 'oozing through' of small units and individual men. In this kind of warfare the Russians have not yet found their masters. . . . These infiltrations," he adds, "were carried out with incredible skill, almost noiselessly and without a shot being fired." On the other hand, he writes: "... the rigidity of Russian attacks was almost proverbial. ... The foolish repetition of attacks on the same spot, the rigidity of the Russian artillery fire, and the selection of the terrain for the attack, betrayed a total lack of imagination and mental mobility." He also points out that the Russian principle of pressing attacks regardless of their cost could have been turned against them with terrible effect. "I think," he writes, "we could certainly have achieved a strategic stalemate in the East," had Hitler been content to "let the monster destroy himself by his own exertions."

In spite of the recklessness of the Russian soldier in the attack, his indifference to death, his fatalism, and his stubbornness in the defence, Mellenthin's experience was that he is temperamentally unstable; "... he is carried on by the herd instinct," he writes, "and is therefore not able to endure a sudden change from a triumphant advance to an enforced and precipitate withdrawal." Because his weakness lies in his inability to face surprise, and because the unexpected throws him off balance, Mellenthin suggests that he should be met by manoeuvre and not by rigid defence. Nevertheless, he adds: "It will be much better to overestimate Russian toughness; softness is the exception and nobody can ever depend on the lucky case when the Russians will prove soft."

In Mellenthin's opinion, the rise of the Russian tank arm completely revolutionized the massive and cumbersome Tsarist armies of former days. "Today," he writes, "any realistic plan for European defence must visualize that the air fleets and tank armies of the Soviet Union will throw themselves upon us with a velocity and a fury far eclipsing any *blitzkrieg* of the Second World War. Europe is threatened by a torrent of steel, controlled by men whose spiritual outlook is not far removed from that of Attila or Jenghiz Khan."

The book has a full index and is illustrated by 60 admirable maps. It should prove of great value to all students of the last war.

Regimental History, The Royal Hampshire Regiment, Volume III, 1918-1954. By David Scott Daniell. (Gale and Polden.) 30s.

The author of this excellent volume has undoubtedly had to face the problem of condensing a mass of material, for the 'Tigers' were actively employed in the years between the wars and sent six battalions on active service in the 1939–45 War. The Regiment already had a high and jealously guarded reputation for efficiency in peace and war; it was always notable for skill-at-arms, smartness, and discipline. The author has succeeded in showing how the 'Tigers' enhanced their reputation, and that regimental characteristics remained unchanged to the end in spite of the fact that their heavy casualties were by no means always replaced by Hampshire men.

At the outbreak of war the 1st Battalion was in the Middle East but, after the early operations in Libya, went to Malta, served throughout the siege with the famous 231st Brigade and with them made assault landings in Sicily, Italy, and Arromanches, 6th June, 1944, and then took part in the subsequent advance to the Rhine. The 2nd Battalion served in France, 1939–1940, with the 1st Division; in Tunisia, 1942–1943, with the 78th Division; then with the 128th (Hampshire) Brigade, 46th Division. This Brigade,

originally consisting of the 1/4th, 2/4th, and 5th Battalions, fought in Tunisia, Italy, and Greece. In May, 1943, the 2/4th Battalion was withdrawn to form beach defence groups and replaced by the 2nd Battalion. Reformed later the 2/4th served with the 4th Division in Italy and Greece. Another Territorial battalion, the 7th, landed in Normandy on 22nd June, 1944, with the 43rd Division, and a new battalion, converted to armour, arrived some ten days later: both fought a distinguished campaign ending in the heart of Germany.

It is difficult to pick the Regiment's best achievements in the long struggle during which all battalions did so well. Those, which for their effect on current operations seem outstanding, were the 1st Battalion at Arromanches, the 2nd Battalion at Tabourba, November, 1942, and the 5th Battalion at Sidi Nsir, February, 1943. To these must be added the 128th Brigade at Hunt's Gap, February, 1943, in the Salerno landing, and in the actions at Ornito in February, 1944; also the 2/4th Battalion at Cassino, May, 1944. In 1946, the Regiment was granted the distinction 'Royal'—never was this honour better deserved.

This volume is sensibly arranged, the narratives are clear and the background is adequate. The supporting arms are not forgotten in the narratives, especially the magnificent stand of 155th Field Battery, Royal Artillery, with the 5th Battalion at Sidi Nsir. The volume is well produced; it has 25 sketch-maps in the text, and end-papers showing the movements of the various battalions throughout the war. There is an index and a list of honours and awards, including three V.Cs., which take up five pages. All Hampshire should be proud of their County Regiment and of its achievements.

AIR

Air Power. By Asher Lee. (Gerald Duckworth.) 15s.

The author, who served as an intelligence officer in the Royal Air Force during the last war, has already attained a reputation as one of the leading authorities on military aviation. He has previously published two books dealing with the German and Soviet air forces respectively. The purpose of this volume, to quote his own words, is "to attempt to rethink some of the aspects of past, present, and future air power." In dealing with the past he skilfully analyses the tactical and strategic uses of the air arm during the last 40 years, and arrives at the conclusion that in the past too much stress has been laid on the effect of the organization of air power and too little on the inevitable flexibility of its use. "To talk of an independent bomber force is in a sense quite absurd and even dangerous. And it is even more dangerous to give it directions which are independent of army and navy requirements."

In dealing with the present he sees the time now ripe for preliminary steps towards the ultimate and inevitable aim of combined national defence Services. Why not start now, he argues, at the top by creating combined defence headquarters whose commanders and staff would belong to a common defence service wearing new uniforms and carrying new ranks, and served by an inter-Service intelligence staff and signal corps.

Turning to the future, Asher Lee makes the bold assumption that the hydrogen bomb will not be used in war, but will contribute largely to keep the peace. He makes no reservations regarding the use of atomic weapons, which he considers are bound to be used in any future major war. This is surely over-simplifying the issue, because the very threat of the thermo-nuclear weapon must have a profound influence in defence organization and strategy.

Here is a book which clearly examines the past and intelligently attempts to predict the future trend of air warfare based on present scientific trends. The author cautiously probes into the future, and there sees the American-Soviet tension relaxing, only to be replaced by German recovery as the greatest danger to peace.

ADDITIONS TO THE LIBRARY

(* Books for Reference in the Library only)

GENERAL

ANIMAL FARM. By George Orwell. Demy 8vo. 120 pages. (Penguin, 1945.) 2s.

ASCENT OF K2. By Professor Ardito Desio. Medium 8vo. 239 pages. (Elek, 1955.) 21s.

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